Volunteering for the Coast

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Volunteering for the Coast is a Web site for people with a passion for lakes, rivers, and the ocean, who want to volunteer or coordinate volunteer efforts. By volunteering for the coast, we can all have a hand at making our shores a better place to live and visit.

Site features:

Coastal Volunteer Network - A searchable data base of coastal volunteer opportunities

Success Stories - Profiles of successful coastal volunteer programs

Resources - Information for volunteers and volunteer coordinators

NEW FEATURE!! Coasthuggers Discussion Group - An interactive Web-based forum for coastal volunteers

NEW FEATURE!! Coastal Volunteers in Action - View video footage of Ed Begly Jr. and others offering their perspectives on volunteerism

---

"We are all connected to the ocean, and rely on its valuable resources in so many ways. Volunteer programs provide the general public with the opportunity to give back to the ocean, and actively participate in marine conservation."

Ted Danson, President
American Oceans Campaign

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Site Index

(top)

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Welcome to the Coastal Volunteer Network

The Coastal Volunteer Network (CVN) is a comprehensive data base of coastal and marine volunteer opportunities around the country.

Volunteers: are you looking for a volunteer opportunity?

Search the Network

Organizations: do you want to add your organization and volunteer opportunities to the data base or edit existing entries?

Access the Network (Authorized users only)

DISCLAIMER: Volunteer organizations and opportunities included in this Web site do not indicate an endorsement by NOAA or other parties involved in the creation of this service.

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Success Stories

These stories offer you the opportunity to learn from your peers. Whether you have a program in place, or are thinking of starting one, these stories highlight keys to success that can benefit any program. These seven stories are only the beginning.

Anacostia Watershed Society: Respecting Coastal Stewards

BAY NET: Training Ambassadors to the Ocean

Center for Marine Conservation: The International Coastal Cleanup is One Step Ahead

Elizabeth River Project: Volunteer Diversity is the Key

Great American Fish Count: Promoting Volunteer Collection of Data

Reef Environmental Education Foundation: Diving into Volunteerism

Tampa BayWatch: Students Nursing Wetlands

Volunteering for the Coast plans to add two stories every six months, and hopefully grow to a place where you are adding your own stories. If you have a program that can offer lessons to other volunteer managers, please send us a message.

(top)

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Resources for Volunteer Coordinators and Volunteers

Whether you are an experienced or first-time volunteer coordinator, new to coastal issues, or just want to get involved, you can learn from the experiences of others. Use this section to access volunteer Web sites, guidelines, handbooks, sample program materials, discussion groups, and other on-line resources. You can also submit new resources.

Materials labeled as "pdf" require Adobe Acrobat Reader. Instructions on how to obtain this free software is available in About this Site. (File sizes are indicated.)

For Volunteer Coordinators

Managing Volunteer Programs
Resources for improving volunteer management

Developing Volunteer Programs
Resources for developing volunteer programs

Tools for Volunteer Coordinators
Links to discussion groups and other helpful tools

For Volunteers

Becoming a Volunteer
How to become active in your community

Finding Coastal Volunteer Opportunities
Visit these sites to locate volunteer opportunities in your state.

Add a Resource

If you have resources that will benefit others, please contact us.

(top) **RETURN**

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Contributors & Credits

This site was developed by the Coastal Services Center (CSC) and Special Projects Office (SPO) of the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service.

For their support and guidance, special thanks go to:

Tom La Pointe and Dan Basta
Special Projects Office

Margaret Davidson and Paul Scholz
Coastal Services Center

Anacostia Watershed Society
BAY NET
Center for Marine Conservation
Elizabeth River Project
Great American Fish Count
Reef Environmental Education Foundation
Tampa BayWatch

Coastal Services Center Team:

Nina Petrovich	CSC Project Lead, Author
Aimee David	Coastal Volunteer Network Coordinator, Author
Caroline Kurrus	Success Stories Coordinator, Author
Jan Kucklick	Author
Hanna Goss	Writing Consultant, Author
Lauren Parker	Copy Editor
Donna McCaskill	Marketing Director
Frank Ruopoli	Graphic Artist (print)
Janine Devereaux	Research

Special Projects Office Team:

Brian Johnson	SPO Project Lead, Web site development
Mike Shelby	Web site development
Stacy Hoppen	Web site development
David Schauder	Coastal Volunteer Network and Web site development
Dave Lott	Coastal Volunteer Network and Web site development
Denise Yver	Graphic Artist (web)
Tony Reyer	Data management
Nipa Parikh	Data management
Craig Russell	Technical reviewer

(top)

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

About this Site

General Information

Volunteering for the Coast was created to enhance stewardship of our nation's coasts and oceans. The goal is to provide you with the tools you need to find a volunteer opportunity or successfully manage a coastal volunteer program.

At least once every six months we plan to add new success stories and test interactive features, such as a page where volunteers can describe their experiences. In a year we will evaluate the site, reviewing your comments and assessing whether the site meets its goal.

Technical Information

Browsers. Netscape Navigator (v4.0 and above) is recommended, although the site is designed to be completely compatible with Microsoft Internet Explorer (v5.0 and above), and other browsers.

Access Time. Many pages contain several photographs. The purpose of these photographs is to enhance the visual appeal of the page and provide supplemental information. Some images have been provided with captions that allow those readers who do not load images immediately, to select specific images for viewing.

Fonts and Type Sizes. Arial, and Helvetica are the default fonts for this site; sizes vary with specific sections and pages. While other fonts will work, as well, we recommend that readers not override this font selection. These fonts have been chosen for easy reading and to be visually pleasant.

Printing Pages. This site has been designed to ensure simple printing. We recommend printing in portrait format at 100%.

Navigation. Navigation through the site is straightforward. To ensure ease of access, all pages have a series of buttons on the left that provide access to all of the major pages on the site.

Site Index. This page contains a complete listing of the higher levels of the site.

(top)

Advanced Features

Streaming audio. Audio is offered as RealAudio. Realplayer can be downloaded at:

http://www.real.com/products/player/index.html

Downloading Materials. Resources are available as downloadable files in Portable Document Format (pdf). These files can be accessed on microcomputers that have installed a recent version of **Adobe Acrobat Reader**.

For Further Technical Information. If you would like information about any technical aspects of this site, please send an email to: Nina.Petrovich@noaa.gov.

For more information, or to comment:

Nina Petrovich
Coastal Resources Social Scientist
NOAA Coastal Services Center
2234 South Hobson Ave
Charleston, SC 29405-2413

Phone: (843) 740-1203
Fax: (843) 740-1313
Email: nina.petrovich@noaa.gov, or click here

(top)

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Managing Volunteer Programs

Information for improving many aspects of managing volunteer programs. Special thanks to CyberVPM.com for many of these materials.

Program Development
Learn how to develop a new volunteer program, including how to develop a volunteer job description (CyberVPM).

Volunteer Board Responsibilities
An example of the responsibilities of new volunteer board members (Friends of Rookery Bay). (pdf, 8k)

Articles of Incorporation & Bylaws
Sample Articles of Incorporation & Bylaws (Friends of Rookery Bay). (pdf, 684k)

Vision Statement and Guiding Principles for Volunteers
Tips for launching grassroots efforts with volunteers of diverse backgrounds (Elizabeth River Project). (pdf, 32k)

Professionalism
Building professionalism in your volunteer program, with examples of volunteer ethics standards (CyberVPM).

Recruitment
Recruit the volunteers you truly want, and learn to market your opportunities successfully (CyberVPM).

Screening
Learn how to screen your volunteers and set-up interviews to attract the right people (CyberVPM).

Training
Examples of volunteer training manuals and handbooks (CyberVPM).

Supervision
Learn how to supervise volunteers, including tips on motivating volunteers, managing problems, and ensuring diversity in your volunteer force (CyberVPM).

Diversity
Tips for fostering diversity in your program, including job preferences for men

and women (CyberVPM).

Evaluation

Evaluate your program. Create goals and objectives and learn to measure outcomes (CyberVPM).

Volunteer - Staff Relationships

Help your staff appreciate volunteers and build better relationships with them (CyberVPM).

Relating to Volunteers

How to thank and relate to volunteers, meet volunteer expectations, and improve communications between staff and volunteers (Rookery Bay Research Reserve). (pdf, text,20k; color slides,3.9 Mb)

Recognition

Over 100 ways to recognize volunteers, with or without funds (CyberVPM).

Gifts for Volunteers

Gift ideas to reward your volunteers.

The Thanks Company

Gift ideas specifically designed to thank volunteers.

(top) **RETURN**

FRIENDS OF ROOKERY BAY BOARD RESPONSIBILITIES

President

Promote FORB/RBNERR in the community
Provide input into meeting agendas and filture directions for FORB
Facilitate board meetings once a month
Serve as spokesperson (i.e. open house, etc.)
Team lead among the four officers
Signature authority on checks

Vice President

Promote FORB/RBNERR in the community
Assist President and facilitate meetings if needed
Work with President on FORB directions and agendas
Serve as spokesperson when necessary
Signature authority on checks
Call board members 24-48 hours prior to a meeting to **remind them of the date** & time

Secretary

Promote FORB/RBNERR in the community
Take minutes at board meetings and send to DEP
Coordinate brochure and flier mailings
Assist with ordering products and supplies
Write occasional "Thank You" letters (A form letter exists that will often serve the purpose.)

Treasurer

Promote FORB/RBNERR in the community
Assist in maintaining FORB accounts
(Suggest I to 1.5 hours per week spent at Rookery Bay so that files can stay at RB headquarters.)
Provide a written treasury report at board meetings
Primary signature authority
Assist in submitting information to IRS for monthly tax reporting
Work with the accountant for yearly tax filing

Board Members

Promote FORB/RBNERR in the community
Support other board members
Participate in monthly meetings
Serve as a committee/project lead or co-lead a minimum of once a year

i.e. Adopt-A-Highway clean-up, Fishing Tournament, etc.

DEP Liaison

Promote FORB within DEP and the community
Guide and assist the board with FORB responsibilities
e.g. accounting, meetings, projects, memberships, etc.
Assist with inventory, maintenance and storage of FORB products and files
Serve as a communication conduit between FORB and DEP
Coordinate volunteer activities at the Reserve

MISSION STATEMENT

The Friends of Rookery Bay, Inc.

The Friends of Rookery Bay, Inc., is a citizen support organization who's purpose is to support the mission of the Rookery Bay National Estuarine Research Reserve in promoting informed management of estuarine and coastal habitats. The Friends' goal is to maintain a volunteer staff who continues to participate in programs of scientific research, community education, and responsible stewardship of the Rookery Bay Estuary system.

ARTICLES OF INCORPORATION

OF

FRIENDS OF ROOKERY BAY, INC.

A FLORIDA NONPROFIT CORPORATION

ARTICLE ONE. NAME

The name of this corporation is FRIENDS OF ROOKERY BAY, INC.

ARTICLE TWO. STATEMENT OF CORPORATE NATURE

This is a nonprofit corporation organized solely for general charitable purposes pursuant to the Florida Not For Profit Corporation Act.

ARTICLE THREE. PURPOSES

The specific and primary purposes for which this corporation is formed are to operate for the advancement of the Rookery Bay National Estuarine Research Reserve and to promote the purposes of the Reserve and to provide citizen support for resource protection, education and research by the Rookery Bay National Estuarine Research Reserve.

The general purposes for which this corporation is formed are to operate exclusively for such educational purposes as will qualify it as an exempt organization under Section 501 (c) (3) of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws, including, for such purposes, the making of distributions to organizations qualifying as tax-

exempt organizations under that Code.

This corporation shall not, as a substantial part of its activities, carry out propaganda or otherwise attempt to influence legislation; nor shall it participate or intervene (by publication or distribution of any statements or otherwise) in any political campaign on behalf of any candidate for public office.

ARTICLE FOUR. DEDICATION OF ASSETS

The property of this incorporation is irrevocably dedicated to educational and research purposes and no part of the net income or assets of this corporation shall ever inure to the benefit of any Director, Officer, or member thereof, or to the benefit of any private individual.

ARTICLE FIVE. MEMBERSHIP

The incorporation shall have a membership distinct from the board of trustees. Any person paying dues as provided for in the bylaws and agreeing to be bound by the articles of incorporation of this corporation, by its bylaws, and by such rules and regulations as the trustees may from time to time adopt, is eligible for membership in the corporation. The trustees shall from time to time prescribe the form and manner in which application may be made for membership.

ARTICLE SIX

LOCATION OF INITIAL REGISTERED OFFICE
AND NAME OF INITIAL REGISTERED AGENT.

The street address of the initial registered office of the corporation is Box 1877A, Rt. 6, City of Naples, County of Collier, State of Florida 33964.

The name of the initial registered agent at such address is Georgia Stamp.

ARTICLE SEVEN. INITIAL DIRECTORS

There shall be three (3) directors constituting the initial board of directors, managers, or trustees.

The name and address of each person who is to serve as an initial director, manager or trustee is:

Georgia Stamp
Box 1877A, Rt. 6
Naples, FL. 33964

Courtenay T. Vass
1360 Green Valley Circle, Apt. 1403
Naples, FL. 33942

Linda S. Weinland
3541 Sacramento Way
Naples, FL. 33942

ARTICLE EIGHT. INCORPORATORS

The names and addresses of the incorporators of this corporation are as follows:

Georgia Stamp
Box 1877A, Rt. 6
Naples, FL. 33964

Courtenay T. Vass
1360 Green Valley Circle, Apt. 1403
Naples, FL. 33942

Linda S. Weinland
3541 Sacramento Way
Naples, FL. 33942

ARTICLE NINE. MANAGEMENT OF CORPORATE AFFAIRS

(a) Board of Trustees: The powers of this corporation shall be exercised, its properties controlled, and its affairs conducted by a board of trustees. The number of trustees of the

corporation shall be not less than three.

The trustees named in Article Seven shall hold office until the first meeting of members to be held on January 14, 1988 at 7:00 p.m. at The Collier County Museum, City of Naples, County of Collier, Florida, at which time an election of trustees shall be held.

Trustees elected at the first annual meeting, and all times thereafter, shall serve for a term of 2 years until the 2nd annual meeting of members following the election of trustees and until the qualifications of the successors in office. Annual meetings shall be held at The Collier County Museum, 7:00 p.m., on the second Thursday in January of each year at the principal office of the corporation, or at such other place or places as the board of trustees may designate from time to time by resolution.

(b) Corporate Officers. The board of trustees shall elect the following officers: President, Vice President, Treasurer and Secretary, and such other officers as the bylaws of this corporation may authorize the trustees to elect from time to time. Such officers shall be initially elected at the first annual meeting of the board of trustees. Until such election is held, the following persons shall serve as corporate officers: Georgia Stamp, President; Courtenay Vass, Vice President; Linda S. Weinland, Secretary/Treasurer.

ARTICLE TEN. DISTRIBUTION OF ASSETS

Upon the dissolution or winding up of this corporation, its assets remaining after payment, or provision for payment, of all debts and liabilities of the corporation, shall be distributed to

a nonprofit fund, foundation, or corporation organized and operated exclusively for educational purposes which has established its tax exempt status under Section 501 (c) (3) of the Internal Revenue Code of 1954, or corresponding provisions of any subsequent federal tax laws.

We, the undersigned, being the incorporators of this corporation, for the purpose of forming this nonprofit charitible corporation under the Laws of the State of Florida have executed these articles of incorporation on August 26, 1987.

Georgia Stamp
GEORGIA STAMP

Courtenay Vass
COURTENAY VASS

Linda S. Weinland
LINDA S. WEINLAND

STATE OF FLORIDA)
COUNTY OF COLLIER)

I HEREBY CERTIFY That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgements, GEORGIA STAMP, to me well known and known to me to be the individual described in and who executed the foregoing Articles of Incorporation, and he acknowledged before me that he executed the same freely and voluntarily for the purposes therein expressed.

WITNESS my hand and official seal at Naples, County of Collier, and State of Florida, this 26th day of August, 1987.

Patricia A. Farley
NOTARY PUBLIC

MY COMMISSION EXPIRES:
NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAY 30,1990
BONDED THRU GENERAL INS. UND

STATE OF FLORIDA)
COUNTY OF COLLIER)

I HEREBY CERTIFY That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgements, COURTENAY VASS, to me well known and known to me to be the individual described in and who executed the foregoing Articles of Incorporation, and he acknowledged before me that he executed the same freely and voluntarily for the purposes therein expressed.

WITNESS my hand and official seal at Naples, County of Collier, and State of Florida, this 27 day of August, 1987.

NOTARY PUBLIC

MY COMMISSION EXPIRES:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. APR 27,1991
BONDED THRU GENERAL INS. UND.

STATE OF FLORIDA)
COUNTY OF COLLIER)

I HEREBY CERTIFY That on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgements, LINDA WEINLAND, to me well known and known to me to be the individual described in and who executed the foregoing Articles of Incorporation, and he acknowledged before me that he executed the same freely and voluntarily for the purposes therein expressed.

WITNESS my hand and official seal at Naples, County of Collier, and State of Florida, this 27 day of August, 1987.

Cecile K Martin
NOTARY PUBLIC

MY COMMISSION EXPIRES:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. APR 27,1991
BONDED THRU GENERAL INS. UND.

ACCEPTANCE BY REGISTERED AGENT

The undersigned hereby accepts the appointment as Registered Agent for this Corporation as set forth in the foregoing Articles of Incorporation.

Dated this _____ day of _____, 1987.

Georgia Stamp,
Registered Agent.

BYLAWS
OF
FRIENDS OF ROOKERY BAY, INC.

This corporation shall be known as the FRIENDS OF ROOKERY BAY, INC., a non-profit Florida Corporation. The principal office and place of business shall be 10 Shell Island Road, Naples, FL 33962.

SECTION 1:

The purposes for which this corporation is formed are for civic purposes within the meaning of Section 501 (c) (3) of the Internal Revenue Code of 1954, and in this connection to enlist support for the Rookery Bay National Estuarine Research Reserve's goals and programs, raising additional funds, securing volunteers, sponsoring special events, accepting donations and aiding staff in implementing the Reserve's management plan. To any other act or thing incidental to or connected with the foregoing purposes or in limitations, if any, as may be contained in the Articles of Incorporation, the Bylaws of the Corporation or any other limitations as may be prescribed for corporations not for profit under Chapter 617, Florida Statutes.

SECTION 2:

Any person regardless of age, sex, race or physical handicap who supports the purpose of the FRIENDS OF ROOKERY BAY is eligible for membership.

SECTION 3:

The annual membership fee shall be $10 for each member, students (under 17) free, $15 per family, $25 fellow, $50 corporate, $100 donor, payable annually in advance.

SECTION 4:

Voting shall be by dues paying members only.

SECTION 5:

A Board of Directors shall be elected for a term of one year. The annual election will be held in July during the regular meeting of the membership.

The members shall vote in person, by secret ballot or on written ballot by mail in conformity with such rules and regulations as the Board of Directors may adopt. Replacements for vacated positions shall be appointed by the Board.

All officers shall be appointed by the Board of Directors for a term of one year. Appointed officers are to be notified as quickly as possible of their appointment and will give proper attention to the office.

SECTION 6:

An annual meeting of the organization shall be held at a time and place to be set each year by the Executive Committee provided, however, that not more than 13 months shall elapse between annual meetings.

Other meetings of the members shall be held from time to time and for whatever purpose deemed appropriate on the call of the Board of Directors provided written notice of the annual or other meetings shall be given each member at least five days prior to the date of the meeting.

SECTION 7:

The Board of Directors may create committees and define the powers and duties of said committees. The Board of Directors shall fill committee assignments by appointment from the regular membership of the FRIENDS OF ROOKERY BAY, subject to confirmation by a majority vote of the membership.

SECTION 8: Members of the organization, individuals and/or organizations who are not members may make contributions to the organization in cash or in-kind contribution. In-kind contributions shall be approved in advance by the Department of Natural Resources or its agent.

SECTION 9:

At all meetings, one-third (1/3) of the regular members in good standing shall constitute a quorum.

At all meetings of the Board of Directors a simple majority shall constitute a quorum.

At committee meetings, a simple majority shall constitute a quorum.

SECTION 10:

In all matters not covered by the provisions of these by-laws, Robert's Rules of Order shall govern.

SECTION 11:

The fiscal year shall commence on July 1 and end on June 30 of each year.

SECTION 12:

No member of this organization shall be entitled to any distributive share of its assets and in the event of dissolution, its assets remaining after payment of its just debts shall be given and distributed only to one or more of the following selected by a majority vote of the Board of Directors of this corporation.

A Corporation, fund, or foundation meeting the conditions prescribed at the time of such distribution by Section 501 (c) (3) of the United States Internal Revenue Code of 1954, or any station enactment amending or replacing that section.

SECTION 13:

These Bylaws may be amended by a majority vote of a quorum of the members in attendance at any regular membership meeting, of any special meeting called for that purpose or by written poll of the membership. Due notice of such meeting shall be given each member five days prior to the meeting.

President

Secretary

Adopted by vote of the Board of Directors at the monthly meeting held on the 28th day of September, 1988 at 8:00 p.m.

Elizabeth River Project

Mission

To form a partnership among the communities and all who earn their living from the river, to raise appreciation for its economic, ecological, and recreational importance and to restore the Elizabeth River system to the highest practical level of environmental quality.

Vision for Volunteers

Volunteers are an integral part of the Elizabeth River Project. The Mission of the Elizabeth River Project can only be accomplished through the joint, cooperative effort of the paid and volunteer staff. Volunteers provide a high-powered, expert work force that:

- Brings the diverse views of all of the constituents of the River to the Elizabeth River Project.
- Establish deep-rooted community support for the Mission of the Elizabeth River Project.
- Multiply the capabilities of the Project by providing the additional expertise and manpower necessary to carry out the Mission of the Elizabeth River Project.
- Contribute to the Mission of the Elizabeth River Project through meaningful and rewarding tasks that recognize and make use of the unique personal and professional background of each volunteer.

Volunteer Guiding Principles

Elizabeth River Project (ERP) volunteers serve in accordance with eight guiding principles.

1. Volunteers support and strive to achieve the objectives of the Watershed Action Plan.
2. Volunteers work in accordance with ERP policies, procedures, standards, and the Watershed Action Plan.
3. Volunteers and ERP professional staff collaborate and cooperate.
4. Effective open lines of communication are maintained between volunteers and staff.
5. Volunteers deserve vital and satisfying roles, clearly defined objectives, and appropriate supervision.
6. Volunteers may "wear many hats;" but, when representing the ERP, always put the interests of the ERP first.
7. Volunteers openly identify any situation that may reasonably be perceived as a conflict of interest and resolve the conflict, real or perceived, as soon as possible.
8. Volunteer work deserves thoughtful evaluation and appreciation.

Tips for Success

Based on an interview with Laura Dukat, volunteer and public outreach coordinator and Susan Cofer, long-time volunteer, this section describes how to get a similar grass roots effort off the ground using a diversity of volunteers.

- The key to success is to have a leader who is humble, willing to delegate, but still keeps a rein on tasks. This leader has to be the focus of the group and have a huge passion for the project. He or she must be able to recognize people's assets and effectively channel their energies.

- To be successful in recruiting and keeping volunteers of diverse backgrounds, the participants must never point fingers, but be willing to listen to a wide variety of opinions and be mediators.

- "The early stages are crucial in setting up a program. That is where the foundation is laid and the building blocks are developed."

- Be willing to draw on a variety of expertise and make lots of phone calls. Use public events, meetings, and public service announcements to advertise the program and recruit volunteers.

- Always stress that volunteers "leave their hat at the door" and come to meetings willing to listen to opposing viewpoints. Although each volunteer's background is important, it can't cloud his or her perspective and judgement.

- Make the meetings fun and include a social element to them (lunch, BBQ, etc.). It's easier for a diverse group to sit down together and address controversial subjects if they first socialize.

- Always include sound science to back up claims and defend positions.

- To set up a similar program, be methodical. Define the problem, determine the solution, lay out the plan, and implement the plan.

Rookery Bay NERR
Staff Workshop

"Relating to Volunteers"

January 6, 1999

RELATING TO VOLUNTEERS

Staff Workshop
RBNERR Headquarters
January 6, 1999, 2:00 - 4:00 PM

GOAL: To review the community outreach program at Rookery Bay and discuss volunteer relationships, improved communications, and programs and projects for 1999.

Ron Swaim, Dianne Cole-Bronczyk and Sam Stamper were invited to participate in the first hour of the workshop. As volunteers, they were asked to express their views on the volunteer program at Rookery Bay NERR. The following topics and suggestions were discussed:

- Formal orientation with an introduction to RBNERR and its staff would be helpful.
- Current volunteers may also participate in the orientation.
- Be specific on staff expectations of volunteers. i.e. help with task preparations, exact location of duties to be performed, personal equipment needed by volunteer(s), etc.
- A checklist should be developed for equipment needs (water, sunscreen, hat, insect repellent, gloves, water shoes, lunch, jackets, etc.)
- Keep volunteers updated on RBNERR news and staff changes.
- Encourage volunteers to share expectations with staff and the staff should in turn be responsive.
- Let volunteers know what can be provided by the Reserve such as PFD's, coolers, water, etc.
- When staff members call volunteers directly (after Diane has made the initial contact), to check with co-workers to see if the same volunteers are being called to avoid phone call repetition.
- Promptness important for staff and volunteers
- "Reminder" phone calls are helpful prior to the task date, especially when several days or weeks lapse between activity dates.
- Clearly explain difficulty level to volunteers as well as if it will be a "dry or wet" day.
- Volunteers complimented staff on project and program knowledge, safety their first concern, thanking volunteers for assisting, dialogue encouraged with staff, and volunteers leave with a feeling of contributing to the management goals of Rookery Bay.
- More acquaintance with "top dog" (management personnel at RBNERR)
- Newsletter would be an excellent communication vehicle
- Notify volunteers about events at Rookery Bay such as visiting investigator talks or other presentations, training or workshops that volunteers may benefit from, and invite volunteers to meetings if they can be of service and support to RBNERR staff.

Getting Acquainted

Greet new volunteers on sight
Make sure volunteer form is completed
Acquaint volunteer with the following:

1 . Volunteer Log location
2. Parking facilities
3. Restrooms
4. Staff offices and phone numbers
5. Dock and boats
6. Facility location (Goodland, Cannon Island, Lab, Headquarters)
7. Vehicle use and log
8. Breaks and lunches

Meeting Expectations: Theirs and Ours

Safety - Main concern of staff and volunteers
Task Understanding: Difficulty, logistics, equipment, team members
Team work: Staff and volunteers sharing duties and responsibilities
Professional language, image, and behavior

- Staff should avoid criticism of DEP, RBNERR, and peers
- Set examples of good work ethics
- Avoid over-familiarity
- Uncomfortable situations shared by either/or volunteers and staff should be promptly reported to the Volunteer Coordinator
- Understand RBNERR flow chart

Keep volunteers posted about new projects and programs (post card notice?)
Develop new volunteer program packet
Communicate more details to volunteers and staff about FORB activities, maintenance. and administration
Complete volunteer directory ASAP (contact information, task experience, staff worked with, interests, etc.)
Volunteers should list on the Volunteer Form not only what they like to do but what they do not want to do
Presentations by staff on new projects ("Sell" to volunteers)
Fun and work ethic - They can go together
Building a skilled volunteer work force

KUDOS can take many forms

Most important "Thank You"-Express verbally to volunteers

Staff might want to bring snacks in the field
Award Ceremony
Thank you note
Follow-up thank you phone call after a difficult day or activity
Include volunteers when visiting different agency offices or events
Tokens that FORB may want to fund (key chains, hats, T-shirts, etc.)
Reports that could be sent to volunteers that describe results of their project efforts
Posters
Your OWN Unique Ideas!!!!

VOLUNTEER/STAFF COMMUNICATION

• Understanding structure of Rookery Bay and the National Estuarine Research Reserve System

• Field education tied in with practical component. Why are we doing this? Process explained and adequate instruction given to perform task

• Adequate planning by staff for the following:
    Equipment (boats, life jackets, tools, gloves, etc.)
    Logistics
    Personal items:
        i.e. insect repellent, proper attire, sunscreen, water, lunch, etc.

• Promptness - Ready when volunteers arrive

• Call ahead for date, time and location reminders

• Communication
    Atmosphere lends itself to asking questions
    Directions given clearly
    Time periods accurate: i.e 8:00 am - 3:00 pm
    Prepared for land and/or water duty
    Difficulty level understood

• Comments
    Orientation - formal and informal
    Volunteer Newsletter
    Round-up idea

FRIENDS OF ROOKERY BAY MISSION STATEMENT

- The Friends of Rookery Bay, Inc., is a citizen support organization who's purpose is to support the mission of the Rookery Bay National Estuarine Research Reserve in promoting informed management of estuarine and coastal habitats. The Friends' goal is to maintain a volunteer staff who continues to participate in programs of scientific research, community education, and responsible stewardship of the Rookery Bay Estuary system.

RELATING TO VOLUNTEERS

- GETTING ACQUAINTED
- MEETING EXPECTATIONS: THEIRS AND OURS
- KUDOS CAN TAKE MANY FORMS

GETTING ACQUAINTED

Making Introductions

Parking

Vehicle Use

Vessell Identification

Volunteer Form Completed

Volunteer Log Location

Breaks Lunches

Site Familiarity

Headquarters/Lab

Goodland

Cannon Island

Staff Offices/ Phone Numbers

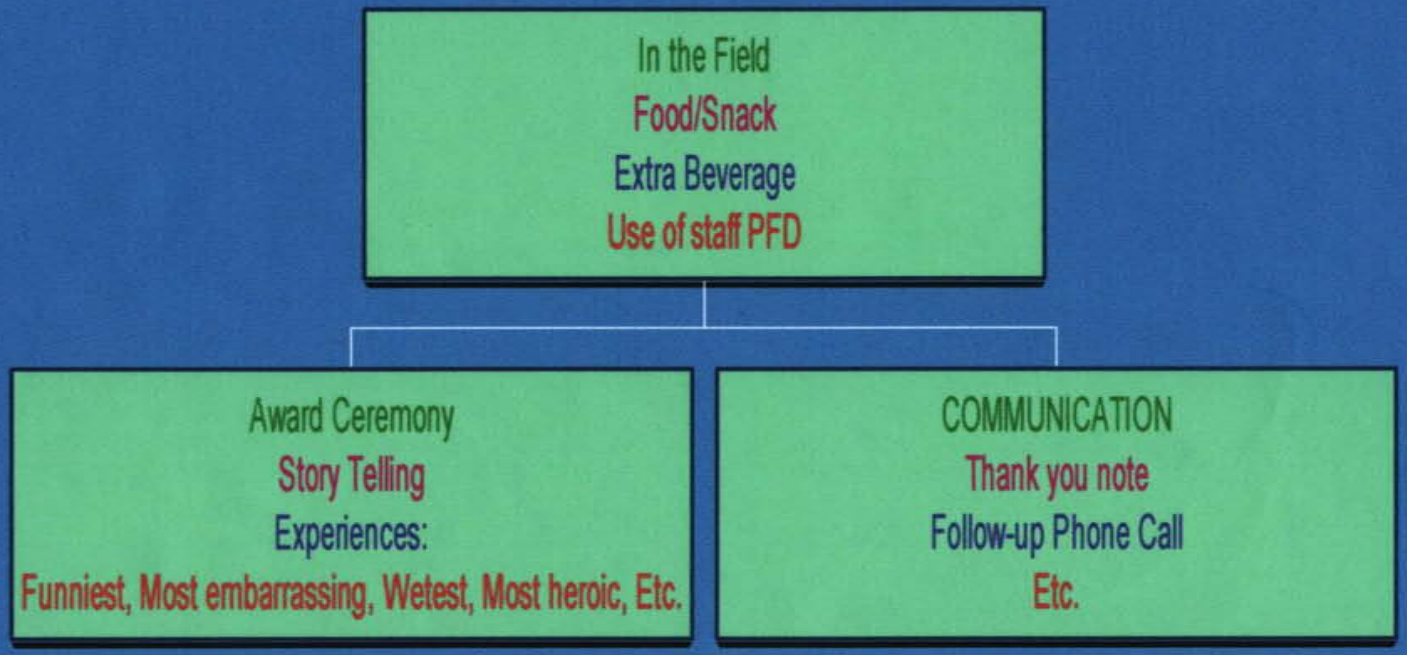
MEETING EXPECTATIONS

- **THEIRS**
- Safety
- Task understanding
- Comfortable with ability to do the job
- Making a contribution
- Enjoyment
- Respect for RBNERR

- **OURS**
- Safety
- Task explanation
- Setting example
- Getting the job done
- Team work - Everyone doing their part
- Fun and work ethic
- Developing skilled volunteer assistance

KUDOS can take many forms

"THANK YOU"



STAFF IDEAS

RELATING to YOUR VOLUNTEER COORDINATOR

- Projects, Projects, Projects
- Details: Time, Date, Equipment
- Lead Time
- Volunteer Directory
- Stay in touch
  - What's working-What's not
- Participation
  - Award Ceremony
  - Orientation
- Community Outreach
  - Extends beyond volunteer program

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Developing Volunteer Programs

Scroll down to a specific type of volunteer program.

Working with Water

Resources for developing water quality monitoring and other water-based programs

Volunteer Water Monitoring
Tips on using volunteers to monitor water, including how to get started, laws and regulations, state coordinators, and methods for estuarine, riverine, and lake water monitoring (EPA).

The Volunteer Monitor
National newsletter about volunteer water quality monitoring (EPA).

Volunteer Monitoring
Find resources for volunteer water monitoring (EPA).

How We Can Keep Our Waters Clean
A coloring book developed as a promotional item for the annual Beach/River Sweep (South Carolina Sea Grant Consortium). (pdf, 1.8 Mb)

Working with Animals

Resources for developing programs to monitor fish and other water-dependent life

Volunteer Event Flyers
Examples of flyers for a catch-and-release fishing tournament, "Explore Your Backyard Day," and invasive, nonnative species eradication month (Rookery Bay Research Reserve). (pdf, 4.1 Mb)

Fish Survey
View this sample fish survey form and find out how data that volunteers collect has been used (REEF/Great American Fish Count). (pdf, 3.5 Mb)

What is Fish Habitat and Why Should We Save It?
Information on fish habitat, special features for kids and teachers, and tips for

how to save habitats (American Oceans Campaign).

Fish Gallery
Find pictures and information about several common reef fish (REEF).

Working with Land

Information about beach cleanups and other land-based volunteer programs

Runoff, Sediment, and Development Pressures
Publications about polluted runoff, contaminated sediments, and coastal development are available for download (Coast Alliance).

International Coastal Cleanup
History of the beach cleanup program and connections to national coordinators (Center for Marine Conservation).

Working with Plants

Information about habitat restoration and other re-planting projects

Saltmarsh Wetland Nursery Program Operations Manual
A step-by-step guide for building a high school wetland nursery program (Tampa Baywatch). (pdf, 3 Mb)

Habitat Restoration
Information on existing community-based habitat restoration grants and programs (NOAA/NMFS).

Estuarine Restoration
Information about habitat restoration, education, and estuary facts (Restore America's Estuaries).

(top) **RETURN**

How We Can Keep Our Waters Clean

with Petey Pelican and Otto Otter

LEAVE YOUR MARK ON HISTORY....
DO THE SWEEP!

BEACH SWEEP/RIVER SWEEP

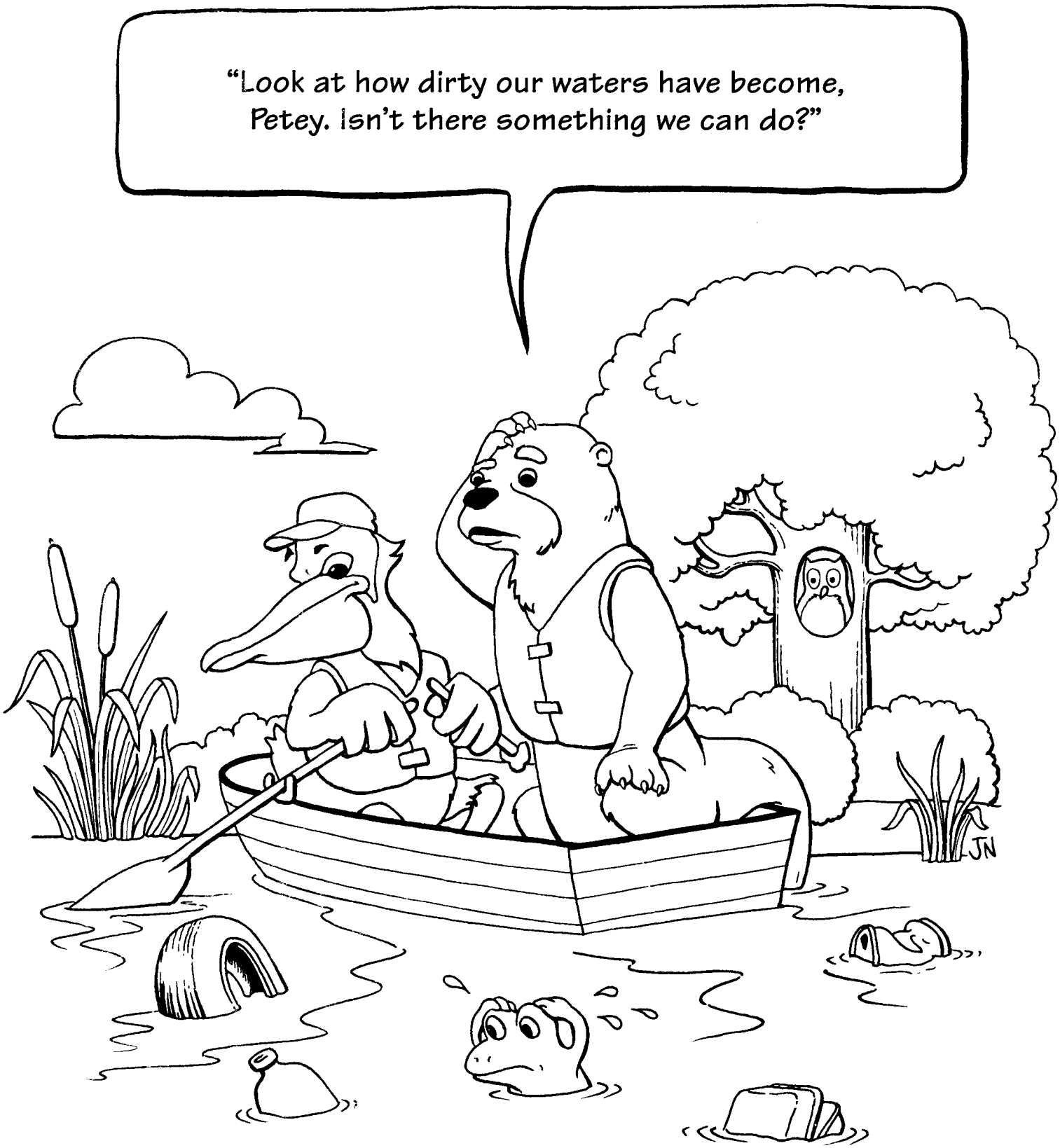
Organized by S.C. Sea Grant Consortium, S.C. Department of Natural Resources, and SCANA Corporation.

Sea Grant
S.C. Sea Grant Consortium

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES
DNR

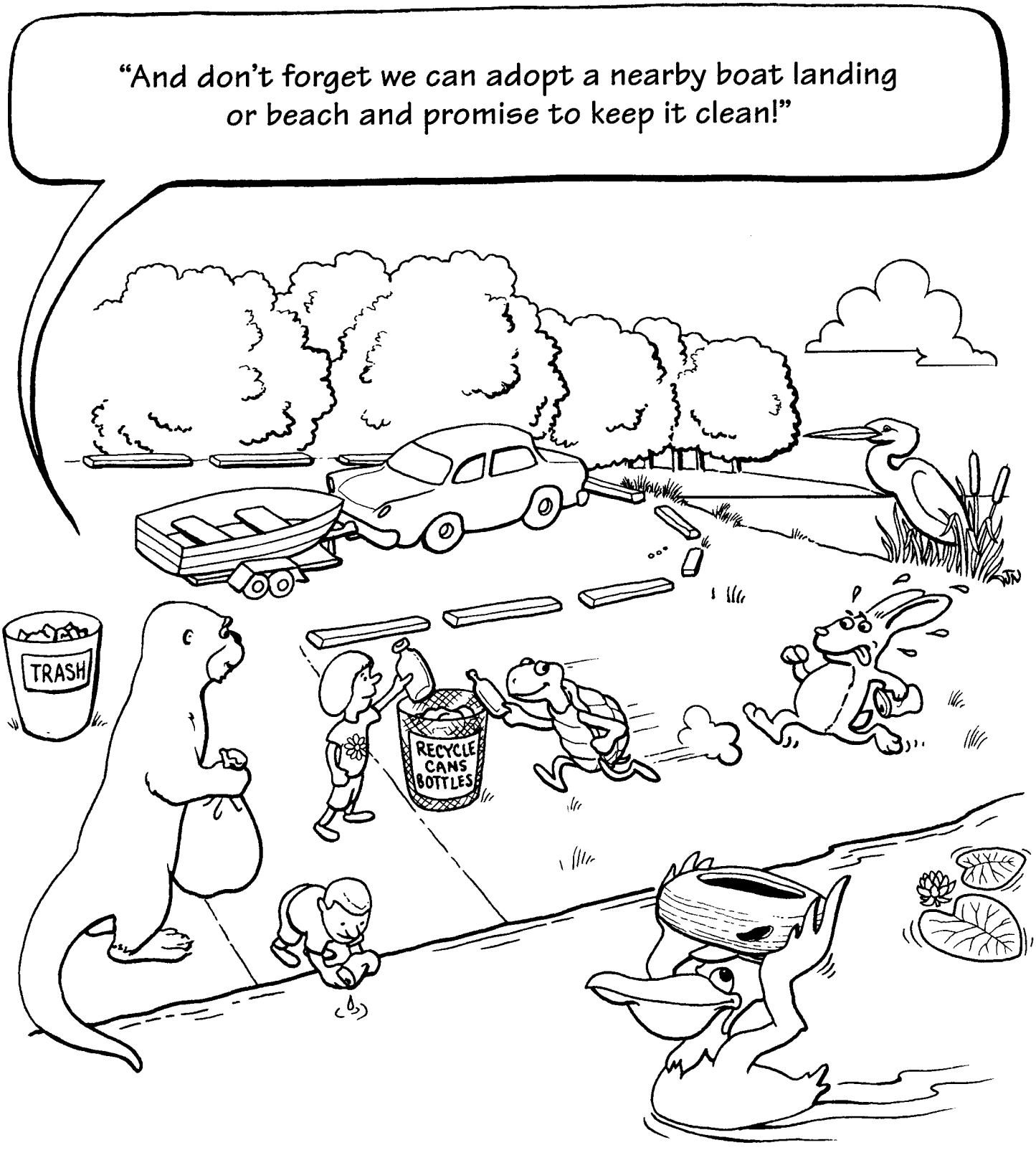
SCANA SM
POWER FOR LIVING

Beach Sweep/River Sweep, South Carolina's largest annual one-day cleanup of aquatic debris, is a joint program of the S.C. Sea Grant Consortium, the S.C. Department of Natural Resources, and SCANA Corporation. For more information on Beach Sweep/River Sweep, call (843) 727-2078 or (803) 734-9105.


"Look at how dirty our waters have become, Petey. Isn't there something we can do?"
JN

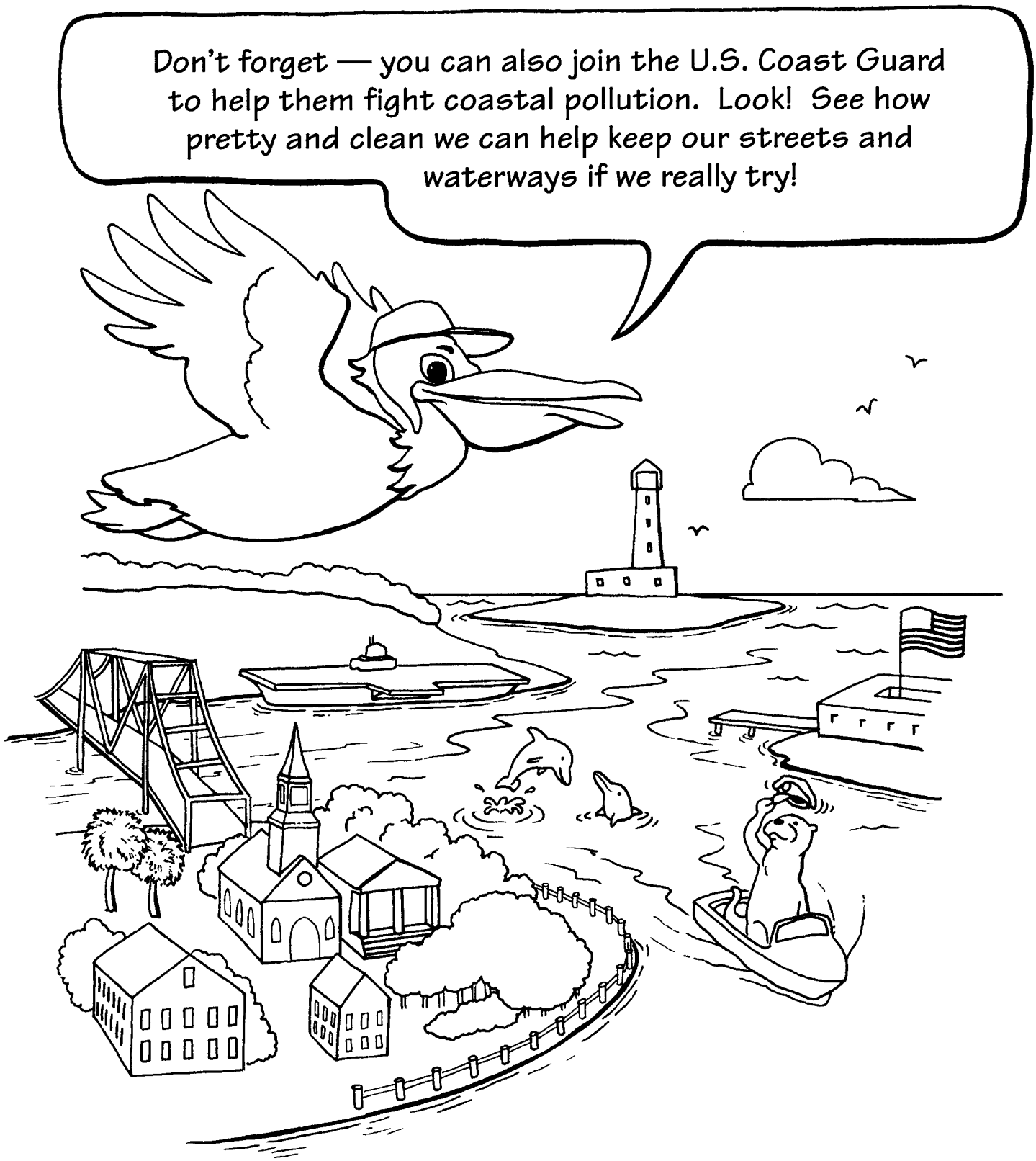
Beach Sweep/River Sweep volunteers help pick up trash from our lakes, rivers, and oceans. Anyone can become part of the "solution to pollution." To take part in Beach Sweep/River Sweep on the third Saturday in September, call S.C. Sea Grant at (843) 727-2078 or S.C. Department of Natural Resources at (803) 734-9105.

Plus-One Boating means that every time you go out in a boat, you should always bring back what you take out, PLUS one other piece of trash you find in the water. For more information about Plus-One Boating, call S.C. Sea Grant at (843) 727-2078 or S.C.DNR at (803) 734-9105.



Adopt-A-Landing and Adopt-A-Beach are two programs which let you and your friends pick out your very own spot to keep clean year round. To adopt a landing, call the S.C. Department of Natural Resources at (843) 734-9105. To adopt a beach, call the Office of Ocean and Coastal Resource Management at (843) 744-5838.

Painting DON'T DUMP! messages on storm drains reminds people that everything we dump into storm drains flows into our rivers and oceans. To paint a storm drain, have your teacher or parent call Sea Grant Extension at (843) 722-5940.

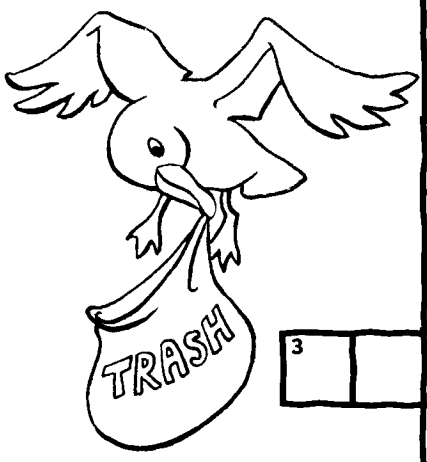


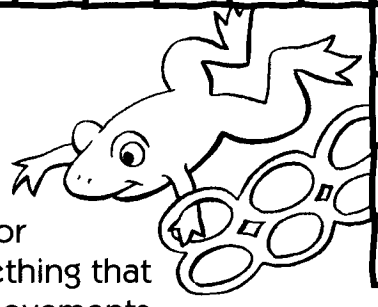
You, too, can become a "Sea Partner"! Together, we can make a real difference! To find out more about the Sea Partners Program or the U.S. Coast Guard, call Jane Quattrochi at (843) 884-5682 or e-mail her at <JaneQ@Juno.com>.

WE ARE THE SOLUTION TO POLLUTION!

By each of us doing his or her part, together
we can all help keep our waters clean and safe!

CROSSWORD PUZZLE



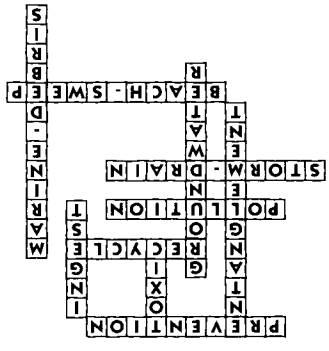


Across

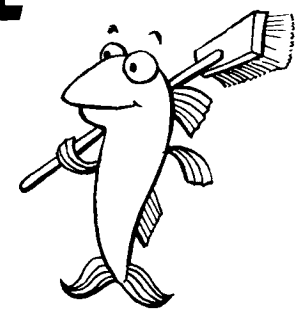
1. Keeping something from happening
2. To use an item again or change into new product
3. Something that doesn't belong and is harmful to the environment
4. Something you can paint on to stop people from dumping into rivers, lakes, and oceans (two words)
5. _____ _____ /River Sweep brings people out once a year to help pick up trash from our lakes, rivers and oceans (two words)

Down

6. To be tangled or caught in something that limits normal movements
7. Poisonous
8. To swallow or take into the body
9. Water found beneath the earth's surface, sometimes used as a source of drinking water
10. Solid wastes that have been discarded or washed into the ocean (two words)



WORD SCRAMBLE



EIMRAN _____

LUPLONITO _____

ELCAPIN _____

GTINES _____

DBGOIDREAALEB _____

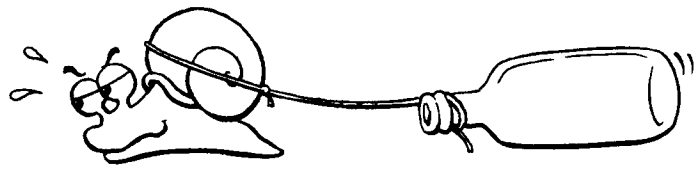
YCRCELE _____

RTTLUE _____

CXOTI _____

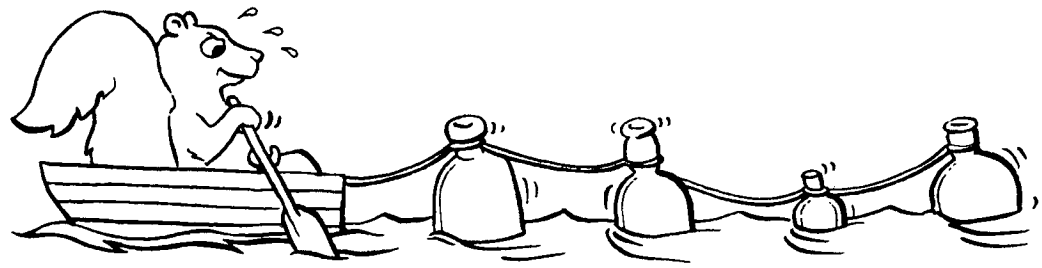
BCEHA WEPSE _____

ATOCS UAGDR _____

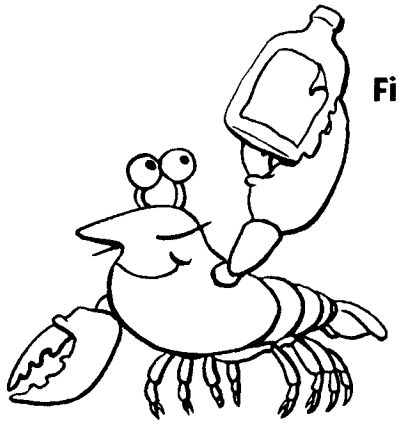


Answers:
MARINE
POLLUTION
PELICAN
INGEST
BIODEGRADABLE
RECYCLE
TURTLE
TOXIC
BEACH SWEEP
COAST GUARD

WORD SEARCH/SEEK AND FIND



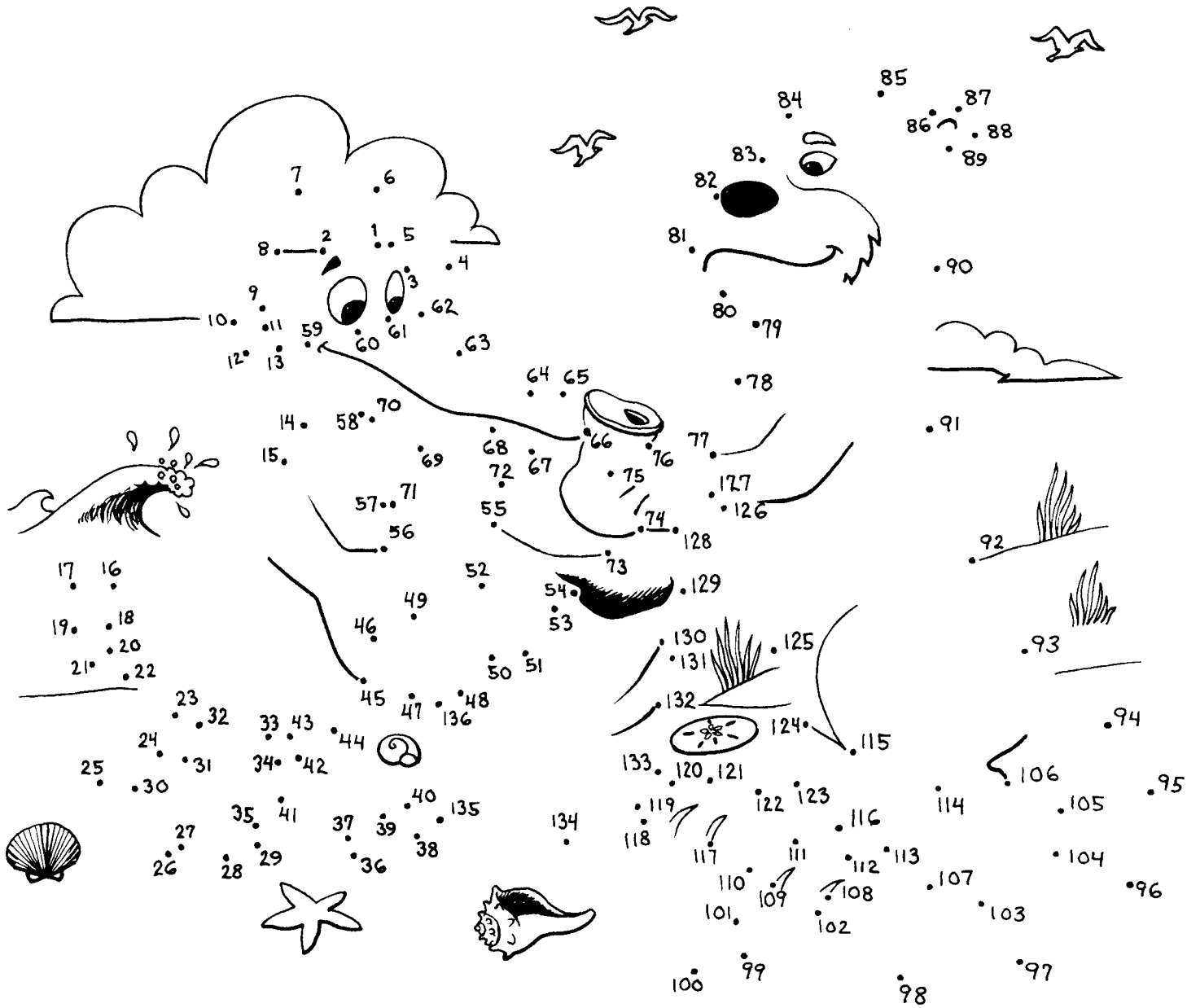
M A R I N E D E B R I S C K O U T R B T Z U C C
O M E B D G L P O X A U T N K X O P W B A C B O
O F S G P U C G M R N M C O N S E R V A T I O N
B G T U O D G L Y A P Z K U U M Y E E Y G L U T
R P O L L U T I O N O Y X B S R D C P F X M T A
Z F R I S M L P X D C P O L L X T Y O P M R M M
T O A Z P F D I S C A R D K G D C C Y W L O R I
E Z T M Z D B N L Y U D X A U C B L U D X E P N
P W I G E K C G R M B Y X L A B A E P K O Z O A
S N O F M S P E N T A N G L E M E N T E F E D T
O M N T O R L S G N V C B D N R O I P T B D G E
N K R A F T E T L Z W C T O X I C D S S M R L C
B I W S D E G R A D A B L E W D M V U T R G M C
R U Z B M D N C F N F O O D C H A I N Z R D U T



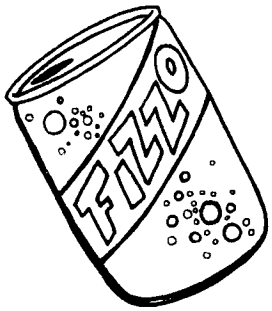
Find These Words:

Pollution
Contaminate
Food Chain
Ingest
Entanglement
Restoration
Marine Debris
Degradable
Discard
Toxic
Recycle
Conservation

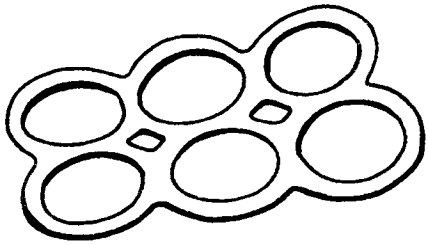
CONNECT THE DOTS



MATCH POLLUTANTS AND AMOUNT OF TIME IT TAKES TO DEGRADE

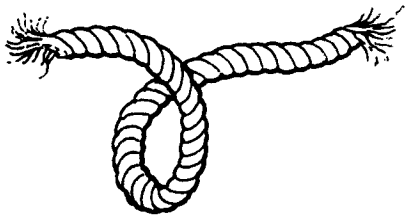


75 Years

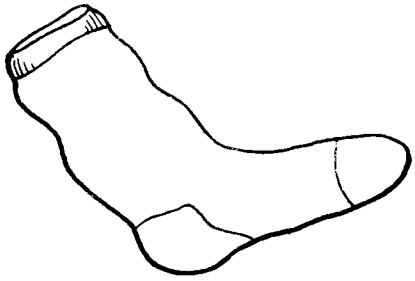


1 Year

200-500 Years



3-14 Months

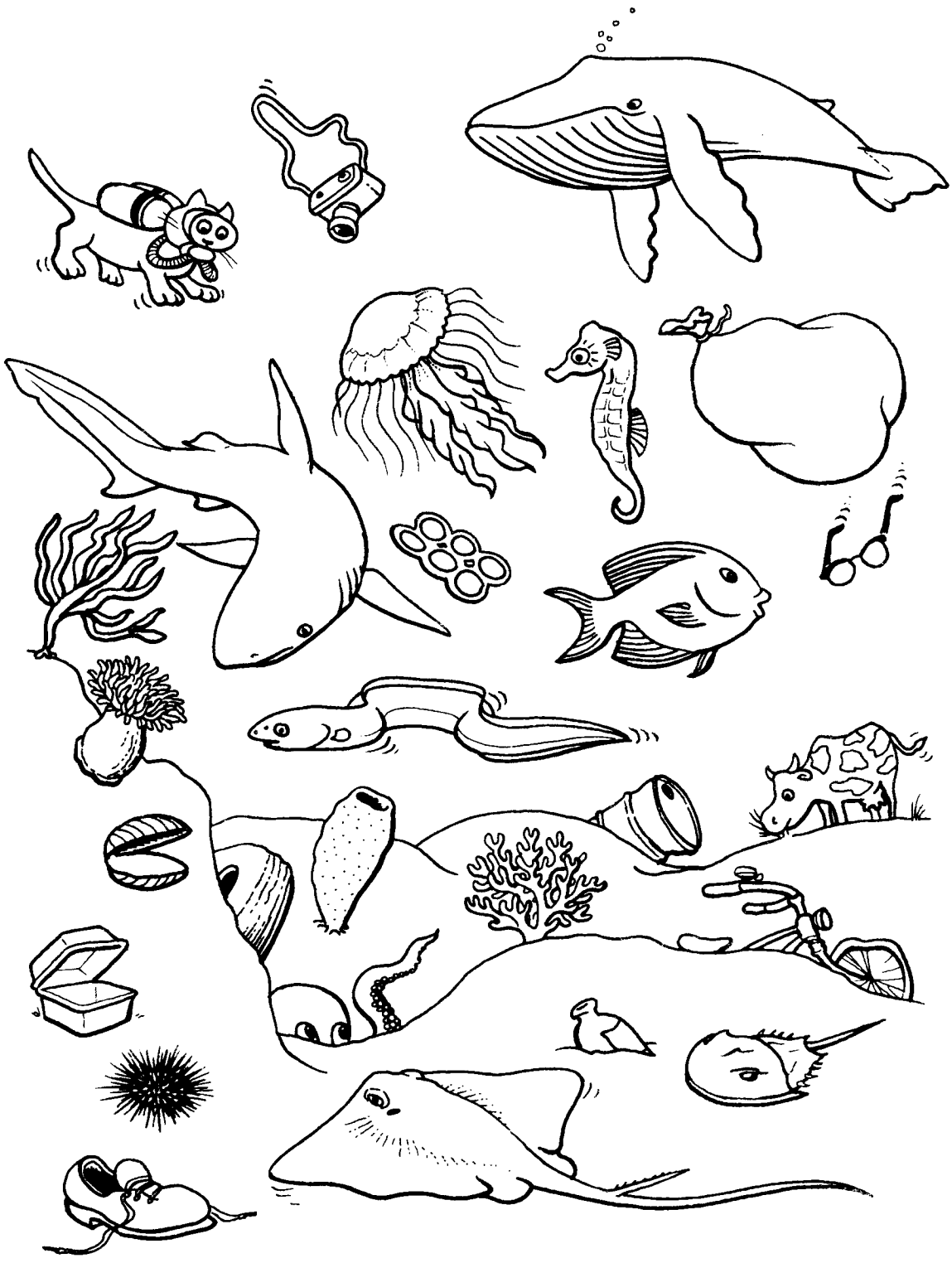


450 Years

Answers:

Aluminum Can — 200 - 500 Years
Six-Pack Ring — 450 Years
Cigarette Butt — 75 Years
Piece of Rope — 3 - 14 Months
Wool Sock — 1 Year

CIRCLE THINGS THAT DON'T BELONG IN THE OCEAN



BEACH SWEEP RIVER SWEEP

SOUTH CAROLINA

Organized by S.C. Sea Grant Consortium, S.C. Department of Natural Resources, and SCANA Corporation.

Funding for this activity book was provided by:

Supporting Benefactors Amoco Chemicals Co., Cooper River Plant, Wando; Amoco Fabrics & Fibers, Seneca and Spartanburg; Amoco Performance Products, Greenville and Rock Hill; Ben & Jerry's Charleston; Brita® Water Filtration Systems; Carolina Power & Light Company; SC DHEC Office of Ocean and Coastal Resource Management; Duke Power Company; Georgetown Steel Corp.; NOAA Coastal Services Center; Santee Cooper; Sonoco Products, Inc.; Sunny 96.9 FM, Charleston **Benefactors** Myrtle Beach Sun News **Patrons** City Marina Company; Bayer Corporation; BMW Manufacturing Corporation; The R.L. Bryan Company; Sierra Club, S.C. Chapter; The South Carolina Aquarium **Supporters** Charleston Natural History Society; Dollar General Corp.; Great Beach Management; Image Network; Del Webb's Sun City Hilton Head; Springs Industries; Wal-Mart Stores, Inc.; Westvaco Corp.

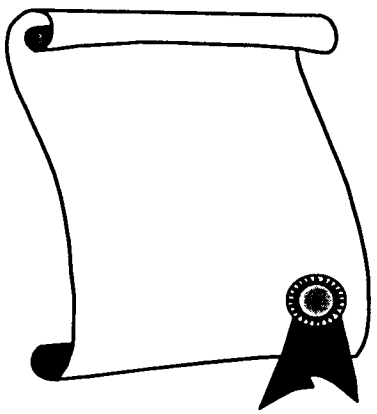
For more information on the following programs please call the listed numbers:

Beach Sweep/River Sweep	(843) 727-2078 or (803) 734-9105
Plus-One Boating	(843) 727-2078 or (803) 734-9105
Adopt-A-Landing	(803) 734-9105
Adopt-A-Beach	(843) 744-5838
Sea Partners	(843) 884-5682
Paint the Drain	(843) 722-5940

Florida Department of Environmental Protection

Governor's Proclamation

October, 1997, declared as INVASIVE NONNATIVE PLANT ERADICATION AWARENESS MONTH



Rookery Bay National Estuarine Research Reserve applaudes Governor Lawton Chiles' recognition of the problems invasive nonnative plant species are causing throughout the state of Florida. When exotic plants are removed from their natural habitats, biological constraints are also left behind enabling them to out-compete native plants.

In Collier County boaters can see acres of Australian Pine on islands such as Keywadin and Cannon while Melaleuca and Brazilian Pepper continue to flourish throughout the state. Increased tax dollars will be required to control this invasion on public conservation, recreation and agriculture lands. These dollars can be minimized by a few hours of citizen support monthly to eradicate these invaders and help restore the natural beauty and biological health to Florida's landscape.

Please help Rookery Bay NERR on **Sunday, October 26, from 9:00** a.m. **until noon** to eradicate Brazilian Pepper from along Shell Island Road. Staff and the Friends of Rookery Bay will join in to stop the spread of this nonnative species. Natural diversity can only exist where exotics don't.

For more information, call Diane at Rookery Bay NERR: 417-6310

Rookery Bay
National Estuarine Research Reserve

The Friends Of
ROOKERY BAY

FIRST ANNUAL VOLUNTEER AWARD CEREMONY

Presented by

ROOKERY BAY NATIONAL ESTURINE RESEARCH RESERVE

PROGRAM

11:00 A.M. - 1:00 P.M.
Sunday, March 29, 1998

Buffet Brunch supplied by the Friends of Rookery Bay
And hosted by Rookery Bay NERR

Welcome and Introduction	*Diane Murray* *Community Outreach*
Volunteers, Staff & Teamwork	*Gary Lytton* *Environmental* *Administrator*
Presentation of Awards	*Diane Murray*
Concluding Remarks	*Ginger Hinchcliff* *Education Coordinator*

VOLUNTEERS NEEDED FOR CREATING A

SHELL COLLECTION

PURPOSE: Rookery Bay National Estuarine Research Reserve, with the help of willing hands, intends to establish a mollusc research collection.

MINI-COURSE STRUCTURE:

Thursday, December 5 7:00-9:00 PM
Background & Planning/Headquarters Building

Saturday, December 7 9:00 AM - 3:00 PM
Field trip to an outer island and embayment, traveling by Rookery Bay mullet skiffs. Space limited to 20 participants. Meet at Shell Island Road facility.

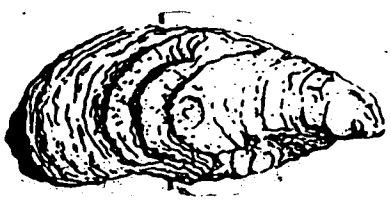
Monday, December 16 6:00-9:00 PM
Sorting collections in the laboratory at the Shell Island Road facility.

The evening session will be held at the Rookery Bay Research Reserve headquarters building on 951 (next to Cablevision). Contact phone: (941) 417-6310

Items needed for the field trip: water, lunch, sunscreen, hat, insect repellent, swimsuit, foul weather gear. Coolers provided. Wading in shallow water will be required.

PARTICIPANTS

Adults of all ages are encouraged and welcome to take part in RBNERR's first venture into "Shell Collecting for Fun & Science." Other sessions will be announced as efforts to expand the collection continue.



Sixth Annual

Rookery Bay

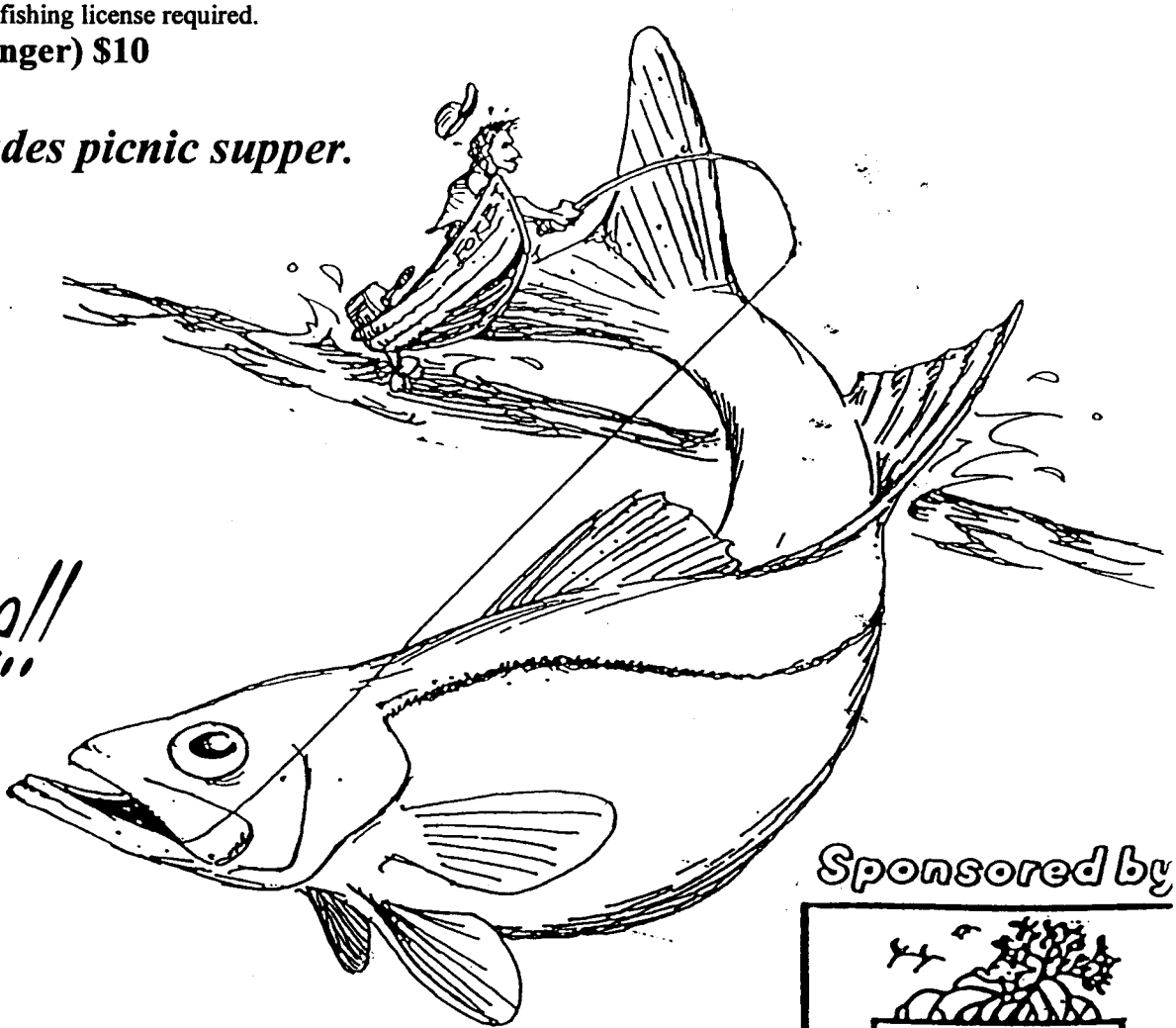
Catch & Release Fishing Tournament

Adults (16 & older) $30

Note: Valid Florida fishing license required.

Children (15 & younger) $10

Price includes picnic supper.



Prizes Galore!!

Sponsored by

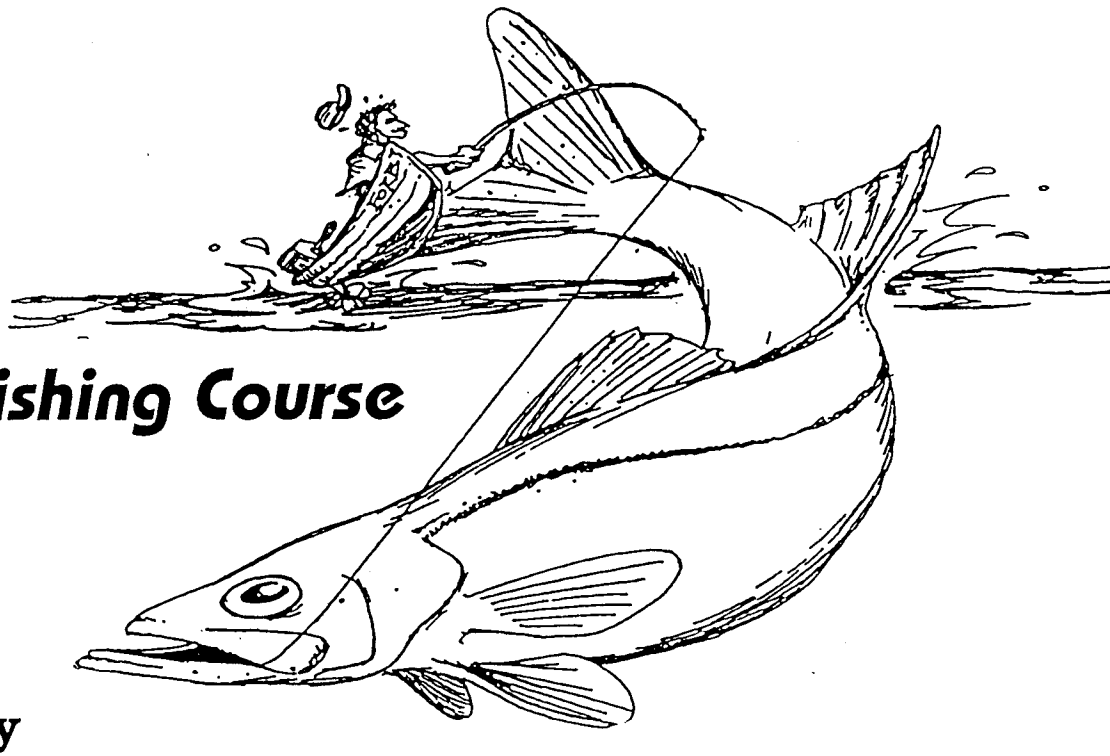
The Friends Of ROOKERY BAY

Saturday June 13, 1998

To Register call 417-6310

FLORIDA

(OVER)



Inshore Fishing Course

Presented by

The Friends of Rookery Bay and Florida's Department of Environmental Protection At Rookery Bay National Estuarine Research Reserve

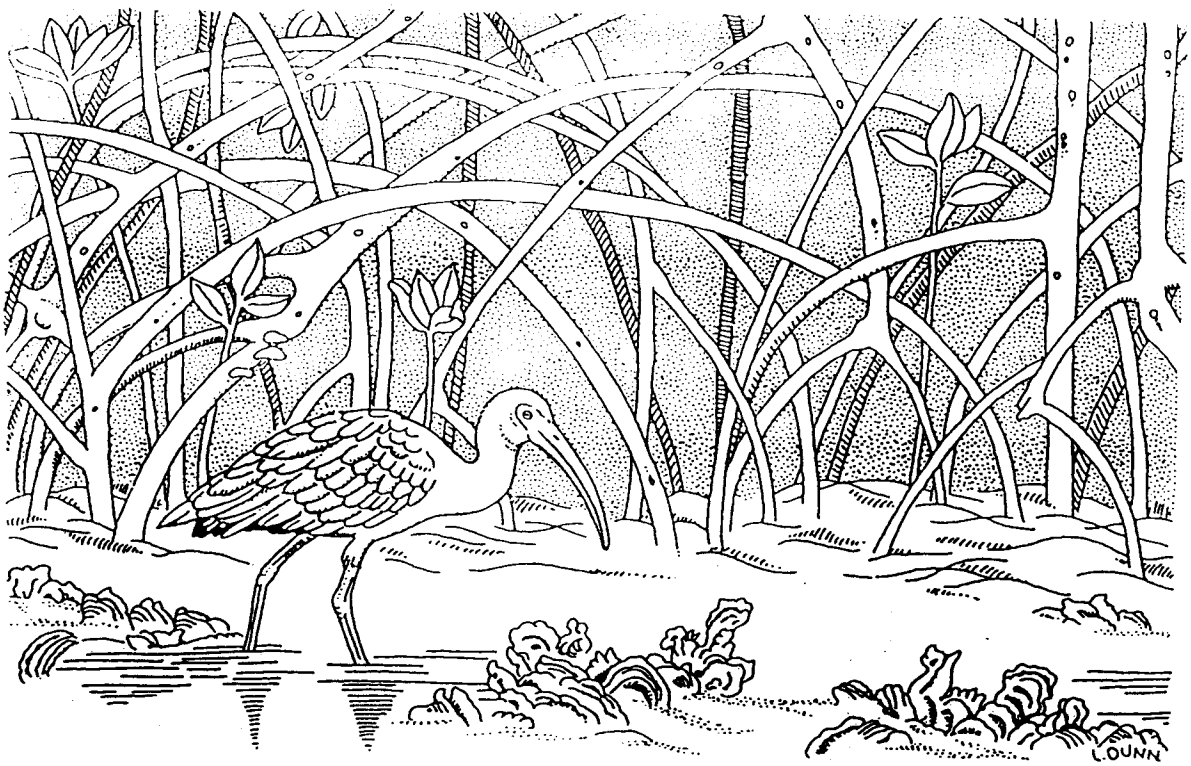
Education Specialist Stephen Theberge will present a three week course, targeting novice anglers, on Inshore Fishing at Rookery Bay's new headquarters. Learn the life history of local fishes, where they can be found, what tackle to use and how to use the equipment to catch the "big one." Fishery regulations, management practices, and conservation issues will also be covered. Call 417-6310 for more information. The course is free, but space is limited.

TIMES: Wednesday evening: 7:00 - 9:00 PM

DATES: May 20,27 and June 2.

WHERE: Rookery Bay Headquarters, 300 Tower Road, Naples (Just off 951 between Naples and Marco Island, across from Media One.)

TO REGISTER: Call 417-6310 between 8:30 a.m. and 5:00 p.m. Mon-Fri. Register early; space is limited.



Explore Your Backyard Bay

A Talk Series Presented by
Rookery Bay National Estuarine Research Reserve
Florida Department of Environmental Protection

This Month the featured presentation will be

Observing Wildlife: Who's watching Who?

Ginger Hinchcliff, Rookery Bay's Education Coordinator, has worked as an educator and park naturalist in areas as different as Alaska's Glacier Bay and the Florida's Everglades. Find out how to effectively observe wildlife without disturbing their natural behavior. Ginger will focus on the wildlife of Rookery Bay and offer helpful wildlife watching tips.

Where: Rookery Bay NERR Headquarters
300 Tower Road (Off 951 next to Media One)
Naples, FL
When: Wednesday, December 17
7:00 - 8:00 PM

Call 417-6310 to register. Space is limited!

MARINE BIOLOGY COURSE

Presented by

Rookery Bay National Estuarine Research Reserve
Florida Department of Environmental Protection

Education Specialist Stephen Theberge will present a four week course on Marine Biology at Rookery Bay's new headquarters. Learn about marine mammals, sharks, rays, bony fishes, crabs shrimp, and their habitats. The course includes a field trip to Rookery Bay where a mullet skiff will be used to do a night trawl and explore the underwater world of southwest Florida. Call 417-6310 for more information. The course is free, but space is limited.

TIMES: Monday Evenings: 7:00 - 9:00 PM

DATES: March 17 through April 7

WHERE: Rookery Bay Headquarters, 300 Tower Road, Naples (Just off 951 between Naples and Marco Island, across from the Continental Cablevision Building.)

TO REGISTER: Call 417-6310 between 8:30 a.m. and 5:00 p.m. Mon-Fri. Register early; space is limited

Mangrove Mayhem

Presented by the Florida Department of Environmental Protection and The Friends of Rookery Bay

Join Heather Stoffel and Nancy Nalley of the Resource Management staff, for an up close look at how both man and nature affect the mangrove forest. Follow the cycle of destruction from Hurricane Andrew and misplaced development through recovery and restoration.

Nancy and Heather 's work takes them into the "field" and through the many aquatic acres of Rookery Bay NERR waters. Their monitoring and research efforts continue to supply important data to the Reserve on recovery trends and developed areas that have been slow to respond after storm events.

They will guide the audience on a visual exploration of research sites and what they're finding.

When: **Wednesday Evening** **February 18, 1998**

Time: **7:00 – 8:00 PM**

Where: **Rookery Bay National Estuarine Research Reserve**
Headquarters Building **300 Tower Road** **Naples**
(off 951 between 41 and Marco Island/across from Media One)

Call 417-6310 for more information.

What is Rookery Bay National Estuarine Research Reserve?

- Estuaries are places where fresh and salt water mix and are important nurseries for recreational and commercial fishes.
- Established in 1978, the Reserve is one of 22 sites within the National Estuarine Research Reserve system in the US and Puerto Rico.
- The Reserve's primary goal is to protect the natural resources and to ensure the preservation of a healthy ecosystem.
- The Research Reserve system is administered by the National Oceanic and Atmospheric Administration (NOAA) in partnership with the Florida Department of Environmental Protection.

Results from 1998 Tournament

Grand Prize 35" Snook - *Tom Peterson*

Most Released 26 Fish - *Terry Kean*

Judges Choice
Broken Down Boat - *Blewett Family*

Most Unusual
9 1/2" Cowfish - *Austin Peluchette*

Categories of Fish

Catfish	Adult=16 1/2"	Child=16"
Snook	Adult=33"	Child=24"
Redfish	Adult=22"	Child=23 1/4"
Jack	Adult=30"	Child=23 1/2"
Snapper	Adult=13"	Child=13"
Sheepshead	Adult=12 1/4"	Child=11"
Seatrout	Adult= 25"	Child=17 1/2"

Total Fish Caught and Released = 576

FRIENDS OF ROOKERY BAY

A CITIZEN SUPPORT ORGANIZATION FOR THE ROOKERY BAY NERR

We need your help in hosting the Best Family Fishing Tournament in Collier County!

THE FRIENDS OF ROOKERY BAY

- 225 of your friends and neighbors
- Community supporters are folks who use and enjoy coastal waters
- An all-volunteer, non-profit organization
- Provides volunteer and fiscal support to the management of Rookery Bay

The Rookery Bay Catch and Release Fishing Tournament is Friends' one big fundraising event each year.

It also serves to:

- provide **education** through free In-shore Fishing Classes prior to the event which includes fishing techniques and tackle and introduction to local waters
- collect data for **research** in **fisheries management** through documenting species and length of fish caught and released during the tournament
- promotes long-term **stewardship** of coastal habitats by encouraging environmentally friendly boating and fishing practices

VOLUNTEER OPPORTUNITIES

RESEARCH ASSISTANT

Recording data
Monitoring various populations of marine animals
Mapping communities
Water quality monitoring

RESOURCE MANAGEMENT

Trail maintenance
Beach clean-up
Eradication of introduced plants and trees
Adopt-a-road

SPECIAL EVENTS

Fishing tournament
Bird count
Staffing booth at fairs

EDUCATION

Educator assistant
Program development

ADMINISTRATIVE

Fund raising
Office support
Newsletter

The Friends Of ROOKERY BAY

300 Tower Road
Naples, FL 34113

Experience Rookery Bay

Rookery Bay Headquarters

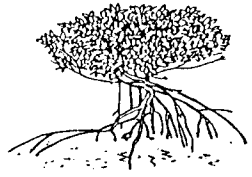
Friends of Rookery Bay
300 Tower Road
Naples, FL 34113

FRIENDS OF ROOKERY BAY

Established in 1987, The Friends of Rookery Bay (FORB) is a volunteer citizen support organization that assists the Florida Department of Environmental Protection in the management of 108,000 acres comprising the Rookery Bay National Estuarine Research Reserve (RBNERR) and adjacent waters.

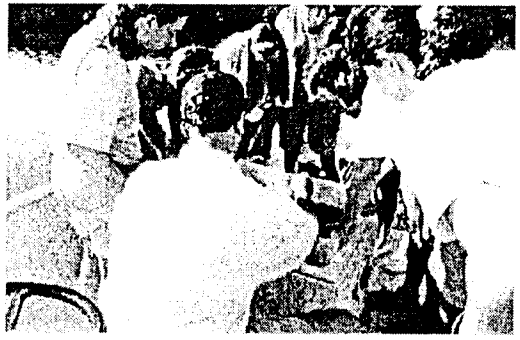
Rookery Bay NERR is one of 22 reserves around the country designated to protect coastal ecosystems through research and education. Rookery Bay is home to hundreds of species of plants and animals including mangroves, manatees, dolphins, sea turtles, bald eagles, roseate spoonbills, snook and redfish. Each year thousands of Florida residents and visitors enjoy boating, fishing, birdwatching, paddling, and beachcombing in Rookery Bay.

Please join us: Experience the natural beauty of Rookery Bay and help us protect this vital resource for Southwest Florida.

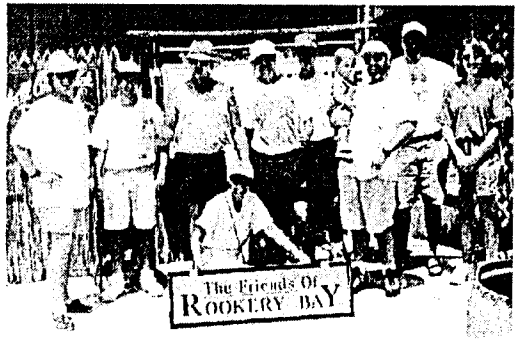


MEMBERSHIP ACTIVITIES

Habitat Protection



On-the-water research and education



Fishing tournament volunteers

Membership Application

____New ____Renewal

Please enter my name in The Friends of Rookery Bay (FORB) membership rolls:

Name(s) _____

Street _____ Apt # _____

City _____ State _____ Zip _____

Membership category _____

Please make check payable to: The Friends of Rookery Bay
For more information contact Diane Murray, (941) 417-6310

The Friends Of ROOKERY BAY

300 Tower Road
Naples, FL 34113
(941) 417-6310

Membership categories:

Individual	$10	Supporting	$50
Family	$20	Business	$100
Student	$5	Donor	$100-$500
School - class	$20		

The Friends of Rookery Bay, Inc. is a not-for-profit organization.
All memberships and donations are tax deductible.

Sponsored by :

Announcing the 1998 Quarterly Bird Counts at Rookery Bay NERR

Paul Hinchcliff, Compiler

The 1997 season of Quarterly Bird Counts at Rookery Bay marked the Tenth Anniversary of these important wildlife censuses under **Friends of Rookery Bay** sponsorship. The QBC has been an ongoing cooperative effort between **FORB** and the Reserve's Education, Research and Resource Management departments, providing an effective, in-the-field learning experience for its volunteer participants, and useful scientific data on bird use of the Reserve's vital habitats to the on-sight managers.

The goal of combining *education opportunities* and *useful field research* has been at the heart of QBC objectives since 1987 and is a major objective of the overall Reserve operating plan. The QBC is now the Reserve's longest running "citizen-science" program. Plans for this coming season include an upgrading of the data collection methodology to improve both the volunteer learning experience and quality of the data to resource managers.

Learning the basics of field birding is the chief draw for new volunteers. Having a regularly scheduled opportunity to view native and migrant birds in their natural habitats, experiencing the rhythm of seasonal change, hiking in limited access native surroundings, and the friendships formed by sharing this common interest keep them coming back. Several members of the team have been "on-the-trail" for years and are excellent teachers of this dynamic field skill. QBC bird records regularly include sightings of Bald Eagles, Roseate Spoonbills, breeding herons and egrets, hawks, owls and a variety of seasonal migrant species.

The QBC is conducted four times each year, on the third Saturday of the designated month, from 7 to about 9am. Routes include all the major upland and wetland edge habitats vital to Rookery Bay. Equipment needs are simple: hat, sunscreen, water bottle and a pair of medium quality binoculars. Field guides that include local bird species are common among participants and are shared readily. A "roundup" for sightings-talk (and free morning munchies) concludes the Count at Rookery Bay HQ.

Check the attached bulletin for phone sign-up numbers, a map and schedule of Counts.

Hope to hear from you!

The Friends of Rookery Bay present

The Quarterly Bird Counts

at Rookery Bay NERR, Naples Florida

THE 1998 SCHEDULE

Count	Date	Time
WINTER	24 JANUARY 98	7-10AM
SPRING	25 APRIL 98	7-10AM
SUMMER	25 JULY 98	7-10AM
FALL	24 OCTOBER 98	7-10AM
▸ all counts on Saturday mornings ◂		

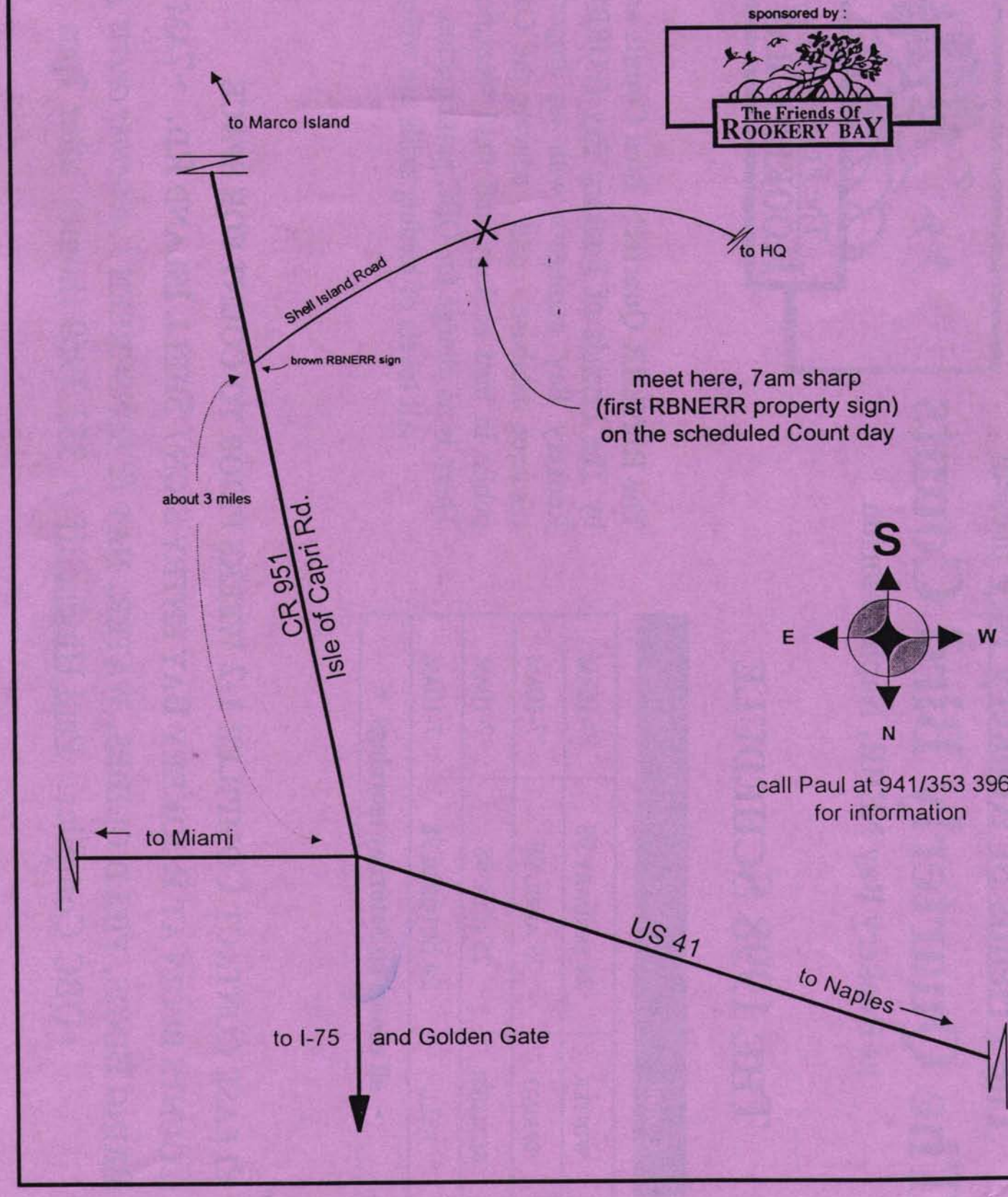
The RBNERR Quarterly Bird Counts are sponsored by The Friends of Rookery Bay (FORB) to provide Rookery Bay managers with an important natural resource database *and* educate the Collier County public in bird ecology and field identification skills. There is no charge for QBC participation.

All levels of birding skills are welcome!

- **PLEASE CONTACT COMPILER 1-2 WEEKS PRIOR TO COUNT FOR SPACE**
- **COUNTS BEGIN AT ROOKERY BAY ENTRY SIGN / SHELL ISLAND RD. ▸7AM SHARP◂**
- **BRING BINOS, FIELD GUIDES, WATER, HAT & SUNSCREEN** / *MUNCHIES GRATIS FORB*

▸QBC Compiler: Paul Hinchcliff / 353-3969 (home) after 7pm

Map to the Morning Rendezvous, Quarterly Bird Counts at Rookery Bay NERR



FISH SURVEY INSTRUCTIONS

The Reef Fish Survey Project sponsored by the Reef Environmental Education Foundation with support from The Nature Conservancy involves recreational divers in the systematic monitoring of fish populations on the coral reef ecosystems of Florida, the Caribbean, and the Bahamas. Each survey gives a marine wildlife "snapshot" of the area sampled. Combined data continually updated by hundreds of divers will provide a valuable database to better support scientists and resource managers to help preserve the biological richness of our coral reefs.

Participation in the ongoing Project is simple. The only materials necessary are an underwater slate, a survey form, a comprehensive fish ID book, such as *Reef Fish Identification* by Paul Humann, enthusiasm and a willingness to contribute to the preservation of our natural marine resources. Experience or training are not prerequisites. An important guideline however for fish surveyors of any skill level is to list only those species that are positively identified. For beginners, this might be less than a dozen species; while experienced volunteers might compile lists of well over a hundred identifications.

Divers are encouraged to actively hunt for species during the entire dive. This is called the "roving diver" technique. Positively identified species are recorded on an underwater slate as they are observed. Surveying can start while dropping down through the water column. Here, plankton feeders and open water species are frequently sighted. Settling on a clear patch of sand near the reef offers the opportunity to record the names of the most common benthic fishes. The remainder of the dive should be spent hunting for additional species. When an unknown fish species is discovered, its' distinguishing features can be sketched on the slate. If a positive identification is confirmed after reviewing your identification text, the species should then be added to the list as a positively sighted species.

COMPLETING YOUR SURVEY SCANSHEET

After the dive, your data should be transferred to the REEF Survey Scansheet which is designed specifically for Florida, the Caribbean, and the Bahamas. Do not use photocopies. The scansheet should be completed entirely **in pencil** and the instructions given on the scansheet followed carefully. REEF must be aware of where your survey was completed. You may be able to provide the navigational coordinates, but if not, make a clear note of the name of the dive site and area of the Caribbean where the survey took place. The REEF Geographic Zone Code for the area will be added by REEF personnel on receipt of your survey or are available on the REEF website at **www.reef.org**. Dive particulars should be recorded on the backside of the scansheet.

Data regarding the fish species observed during your dive is recorded on the inside of the scansheet by darkening the appropriate bubbles next to the names of the particular species sighted. Divers have the option of using the scansheets to enter data for two types of surveys. You may choose to make several Species and Abundance surveys, as well as a separate Species Only during a dive vacation.

Species & Abundance (S&A) Surveys - This survey is intended to provide a clearer picture of fish populations and their fluctuations over the years and between seasons. During a **single dive**, list the names of all positively identified species you observe. At the completion of the dive, record the relative abundance code of each species sighted: [S] single, one sighting; [F] few, 2-10 sightings; [M] many, 11-100, and [A] abundant, over 100. These codes represent your best approximation of the number of each species listed.

Species Only (S) Survey - Information from this survey will be helpful in determining the geographical distribution of fish species. Data for the Species Only Survey can be gathered on **several dives** within a single geographic zone covering a period of up to one month. Divers can actively hunt for new species in a single or wide range of habitats during the day, at night, or both, in an attempt to observe as many different species as possible. When indicating positively identified species on the survey form, fill in only the [S] bubble next to each species sighted, regardless of how many individuals are observed during the course of the survey.

Mail completed survey forms to: **REEF, P.O. BOX 246, KEY LARGO, FL, 33037.**

Reef Fish Survey Project

Reef Environmental Education Foundation

MEMBER ID AND MAILING ADDRESS

Fill in your name and the member ID number assigned to you by REEF when you became a member. You do not need to fill in your address unless one of the following applies to you:

If you have changed your name or address since you sent in your last survey, fill in the new information (on one survey only) and mark the **Change of Name/Address** bubble.

If you are a new member and don't have a member ID or you have lost your ID number, mark the appropriate bubble and fill in your name and address on all surveys (until you receive your number).

Return completed surveys to REEF at the following address:

REEF, Fish Survey Project, P.O. Box 246, Key Largo, FL 33037

- ○ **Change of Name/Address**
- ○ **New Member**
- ○ **Lost ID Number**

First Name | **MI** | **Last Name**

Street Address

MEMBER ID

ENTER FIRST DIGIT

Support provided by:

The Nature Conservancy®

City | **State/Province**

Country | **Zip/Postal Code**

SURVEY TYPE

Fill in the type of survey being taken:

- ○ **Species & Abundance**
- ○ **Species Only**

There are two types of surveys that can be made with this form:

A **Species and Abundance (S&A)** survey is taken on a single dive and records the species positively identified as well as their abundance.

A **Species Only (S)** survey may be taken over multiple dives and indicates which species were positively identified (by marking the **Single (S)** bubble for these species).

GEOGRAPHIC ZONE CODE

Fill in the 4 digit code for the location in which the survey was taken using the numbers found on the **REEF Geographic Code List** (separate sheet).

Enter the code in the left grid below and leave the right grid blank.

ENTER FIRST DIGIT

DO NOT MARK

NAVIGATIONAL COORDINATES

Fill in this section if you can determine the exact longitude and latitude to the minute, or if possible to the hundredth of a minute. **(S&A only)**

Please do not use LORAN coordinates.

LATITUDE - N

DEG	MIN	/100

LONGITUDE - W

DEG	MIN	/100

DIVE SITE

If commonly known, print the local name of the dive site below. ***(S&A only)***

PLEASE DO NOT WRITE IN THIS SHADED AREA

62815

Abundance codes:

(S) Single = 1
(F) Few = 2 - 10
(M) Many = 11 - 100
(A) Abundant = over 100

Please return completed survey forms to:

REEF
Fish Survey Project
P.O. Box 246
Key Largo, FL 33037

- USE A NO. 2 PENCIL ONLY
- DO NOT MAKE ANY STRAY MARKS
- ERASE CLEANLY ANY MARKS YOU CHANGE
- DARKEN THE OVAL COMPLETELY

CORRECT MARK	INCORRECT MARKS
●●●●	⊗ ◌ ⊙ ◒

IMPORTANT: Only mark bubbles for species which are positively identified. ▼ indicates species that are difficult to identify or are commonly misidentified - consult a field guide before marking.

ANGELFISH
- Blue Angelfish
- Cherubfish
- French Angelfish
- Gray Angelfish
- Queen Angelfish
- Rock Beauty

BARRACUDA
- Great Barracuda
- Southern Sennet

BASSLET
- Blackcap Basslet
- Fairy Basslet

BIGEYE
- Bigeye
- Glasseye Snapper

BLENNY
- Arrow Blenny
- Diamond Blenny
- Hairy Blenny ▼
- Molly Miller ▼
- Redlip Blenny
- Rosy Blenny
- Saddled Blenny
- Sailfin Blenny
- Seaweed Blenny
- Spotcheek Blenny ▼

BONNETMOUTH
- Boga
- Bonnetmouth ▼

BOXFISH
- Honeycomb Cowfish
- Scrawled Cowfish
- Smooth Trunkfish
- Spotted Trunkfish
- Trunkfish ▼

BUTTERFLYFISH
- Banded Butterflyfish
- Foureye Butterflyfish
- Longsnout Butterflyfish
- Reef Butterflyfish
- Spotfin Butterflyfish

CARDINALFISH
- Barred Cardinalfish
- Belted Cardinalfish
- Blackfin Cardinalfish
- Dusky Cardinalfish
- Flamefish
- Twospot Cardinalfish
- Whitestar Cardinalfish

CHROMIS (DAMSELFISH)
- Blue Chromis
- Brown Chromis
- Purple Reeffish
- Sunshinefish
- Yellowtail Reeffish

DAMSELFISH
- Beaugregory
- Bicolor Damselfish
- Cocoa Damselfish
- Dusky Damselfish
- Longfin Damselfish
- Sergeant Major
- Threespot Damselfish
- Yellowtail Damselfish

DRUM
- Cubbyu ▼
- Highhat
- Jackknife Fish
- Reef Croaker
- Spotted Drum

EEL
- Brown Garden Eel
- Chain Moray
- Goldentail Moray
- Green Moray
- Purplemouth Moray
- Sharptail Eel
- Spotted Moray
- Viper Moray

FILEFISH
- Orange Filefish ▼
- Orangespotted Filefish
- Scrawled Filefish
- Slender Filefish
- Whitespotted Filefish

FLOUNDER
- Eyed Flounder
- Gulf Flounder
- Peacock Flounder

GOATFISH
- Spotted Goatfish
- Yellow Goatfish

GOBY
- Blue Goby
- Bridled Goby
- Colon Goby
- Goldspot Goby
- Hovering Goby
- Masked/Glass Goby
- Neon Goby
- Orangesided Goby ▼
- Pallid Goby
- Peppermint Goby ▼
- Shortstripe Goby ▼
- Spotlight Goby ▼
- Yellowline Goby ▼

GROUPER (SEABASS)
- Black Grouper
- Comb Grouper ▼
- Coney
- Gag ▼
- Graysby
- Jewfish
- Nassau Grouper
- Red Grouper
- Red Hind
- Rock Hind ▼
- Scamp ▼
- Tiger Grouper
- Yellowfin Grouper ▼
- Yellowmouth Grouper ▼

GRUNT
- Bluestriped Grunt
- Caesar Grunt ▼
- Cottonwick

Mark Reflex® by NCS EM-103968-2:654321

Printed in U.S.A.

- Ⓢ Ⓕ Ⓜ Ⓐ French Grunt
- Ⓢ Ⓕ Ⓜ Ⓐ Margate (Black)
- Ⓢ Ⓕ Ⓜ Ⓐ Margate (White)
- Ⓢ Ⓕ Ⓜ Ⓐ Porkfish
- Ⓢ Ⓕ Ⓜ Ⓐ Sailors Choice
- Ⓢ Ⓕ Ⓜ Ⓐ Smallmouth Grunt ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Spanish Grunt
- Ⓢ Ⓕ Ⓜ Ⓐ Striped Grunt ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Tomtate ▼
- Ⓢ Ⓕ Ⓜ Ⓐ White Grunt

HAMLET (SEABASS)

- Ⓢ Ⓕ Ⓜ Ⓐ Barred Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Black Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Blue Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Butter Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Golden Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Indigo Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Masked Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Shy Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Tan Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Yellowbelly Hamlet ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Yellowtail Hamlet
- Ⓢ Ⓕ Ⓜ Ⓐ Hybrid Hamlet ▼

HOGFISH (WRASSE)

- Ⓢ Ⓕ Ⓜ Ⓐ Hogfish
- Ⓢ Ⓕ Ⓜ Ⓐ Spanish Hogfish
- Ⓢ Ⓕ Ⓜ Ⓐ Spotfin Hogfish ▼

JACK

- Ⓢ Ⓕ Ⓜ Ⓐ Bar Jack
- Ⓢ Ⓕ Ⓜ Ⓐ Blue Runner ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Crevalle Jack ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Greater Amberjack
- Ⓢ Ⓕ Ⓜ Ⓐ Horse-eye Jack ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Palometa ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Permit
- Ⓢ Ⓕ Ⓜ Ⓐ Rainbow Runner ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Yellow Jack ▼

MACKEREL

- Ⓢ Ⓕ Ⓜ Ⓐ Cero
- Ⓢ Ⓕ Ⓜ Ⓐ Spanish Mackerel ▼

PARROTFISH

- Ⓢ Ⓕ Ⓜ Ⓐ Blue Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Bluelip Parrotfish ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Bucktooth Parrotfish ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Greenblotch Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Midnight Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Princess Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Queen Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Rainbow Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Redband Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Redfin Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Redtail Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Stoplight Parrotfish
- Ⓢ Ⓕ Ⓜ Ⓐ Striped Parrotfish

PORGY

- Ⓢ Ⓕ Ⓜ Ⓐ Jolthead Porgy
- Ⓢ Ⓕ Ⓜ Ⓐ Littlehead Porgy ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Pluma ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Saucereye Porgy
- Ⓢ Ⓕ Ⓜ Ⓐ Sheepshead ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Sheepshead Porgy

PUFFER

- Ⓢ Ⓕ Ⓜ Ⓐ Balloonfish
- Ⓢ Ⓕ Ⓜ Ⓐ Bandtail Puffer
- Ⓢ Ⓕ Ⓜ Ⓐ Bridled Burrfish
- Ⓢ Ⓕ Ⓜ Ⓐ Porcupinefish
- Ⓢ Ⓕ Ⓜ Ⓐ Sharpnose Puffer
- Ⓢ Ⓕ Ⓜ Ⓐ Web Burrfish

RAY

- Ⓢ Ⓕ Ⓜ Ⓐ Lesser Electric Ray
- Ⓢ Ⓕ Ⓜ Ⓐ Southern Stingray
- Ⓢ Ⓕ Ⓜ Ⓐ Spotted Eagle Ray
- Ⓢ Ⓕ Ⓜ Ⓐ Yellow Stingray

RAZORFISH (WRASSE)

- Ⓢ Ⓕ Ⓜ Ⓐ Green Razorfish
- Ⓢ Ⓕ Ⓜ Ⓐ Pearly Razorfish ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Rosy Razorfish ▼

SCORPIONFISH

- Ⓢ Ⓕ Ⓜ Ⓐ Plumed Scorpionfish ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Reef Scorpionfish ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Spotted Scorpionfish

SEABASS

- Ⓢ Ⓕ Ⓜ Ⓐ Chalk Bass
- Ⓢ Ⓕ Ⓜ Ⓐ Creole-fish
- Ⓢ Ⓕ Ⓜ Ⓐ Harlequin Bass
- Ⓢ Ⓕ Ⓜ Ⓐ Lantern Bass
- Ⓢ Ⓕ Ⓜ Ⓐ Peppermint Bass
- Ⓢ Ⓕ Ⓜ Ⓐ Sand Perch ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Tobaccofish

SHARK

- Ⓢ Ⓕ Ⓜ Ⓐ Blacktip Shark
- Ⓢ Ⓕ Ⓜ Ⓐ Nurse Shark
- Ⓢ Ⓕ Ⓜ Ⓐ Reef Shark

SNAPPER

- Ⓢ Ⓕ Ⓜ Ⓐ Blackfin Snapper ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Cubera Snapper ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Dog Snapper
- Ⓢ Ⓕ Ⓜ Ⓐ Gray Snapper
- Ⓢ Ⓕ Ⓜ Ⓐ Lane Snapper
- Ⓢ Ⓕ Ⓜ Ⓐ Mahogany Snapper
- Ⓢ Ⓕ Ⓜ Ⓐ Mutton Snapper
- Ⓢ Ⓕ Ⓜ Ⓐ Schoolmaster
- Ⓢ Ⓕ Ⓜ Ⓐ Yellowtail Snapper

SQUIRRELFISH

- Ⓢ Ⓕ Ⓜ Ⓐ Blackbar Soldierfish
- Ⓢ Ⓕ Ⓜ Ⓐ Dusky Squirrelfish
- Ⓢ Ⓕ Ⓜ Ⓐ Longjaw Squirrelfish
- Ⓢ Ⓕ Ⓜ Ⓐ Longspine Squirrelfish
- Ⓢ Ⓕ Ⓜ Ⓐ Reef Squirrelfish
- Ⓢ Ⓕ Ⓜ Ⓐ Squirrelfish

SURGEONFISH

- Ⓢ Ⓕ Ⓜ Ⓐ Blue Tang
- Ⓢ Ⓕ Ⓜ Ⓐ Doctorfish
- Ⓢ Ⓕ Ⓜ Ⓐ Ocean Surgeonfish

TRIGGERFISH

- Ⓢ Ⓕ Ⓜ Ⓐ Black Durgon
- Ⓢ Ⓕ Ⓜ Ⓐ Gray Triggerfish
- Ⓢ Ⓕ Ⓜ Ⓐ Ocean Triggerfish
- Ⓢ Ⓕ Ⓜ Ⓐ Queen Triggerfish
- Ⓢ Ⓕ Ⓜ Ⓐ Sargassum Triggerfish

WRASSE

- Ⓢ Ⓕ Ⓜ Ⓐ Blackear Wrasse
- Ⓢ Ⓕ Ⓜ Ⓐ Bluehead
- Ⓢ Ⓕ Ⓜ Ⓐ Clown Wrasse
- Ⓢ Ⓕ Ⓜ Ⓐ Creole Wrasse
- Ⓢ Ⓕ Ⓜ Ⓐ Puddingwife
- Ⓢ Ⓕ Ⓜ Ⓐ Rainbow Wrasse ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Slippery Dick
- Ⓢ Ⓕ Ⓜ Ⓐ Yellowcheek Wrasse ▼
- Ⓢ Ⓕ Ⓜ Ⓐ Yellowhead Wrasse

OTHERS

- Ⓢ Ⓕ Ⓜ Ⓐ Chub (Bermuda/Yellow)
- Ⓢ Ⓕ Ⓜ Ⓐ Cornetfish, Bluespotted
- Ⓢ Ⓕ Ⓜ Ⓐ Dragonet, Lancer
- Ⓢ Ⓕ Ⓜ Ⓐ Frogfish, Longlure
- Ⓢ Ⓕ Ⓜ Ⓐ Gurnard, Flying
- Ⓢ Ⓕ Ⓜ Ⓐ Hawkfish, Redspotted
- Ⓢ Ⓕ Ⓜ Ⓐ Houndfish
- Ⓢ Ⓕ Ⓜ Ⓐ Jawfish, Yellowhead
- Ⓢ Ⓕ Ⓜ Ⓐ Mojarra, Yellowfin
- Ⓢ Ⓕ Ⓜ Ⓐ Sand Diver
- Ⓢ Ⓕ Ⓜ Ⓐ Sharksucker
- Ⓢ Ⓕ Ⓜ Ⓐ Silversides
- Ⓢ Ⓕ Ⓜ Ⓐ Snook, Common
- Ⓢ Ⓕ Ⓜ Ⓐ Soapfish, Greater
- Ⓢ Ⓕ Ⓜ Ⓐ Spadefish, Atlantic
- Ⓢ Ⓕ Ⓜ Ⓐ Sweeper, Glassy
- Ⓢ Ⓕ Ⓜ Ⓐ Tarpon
- Ⓢ Ⓕ Ⓜ Ⓐ Tilefish, Sand
- Ⓢ Ⓕ Ⓜ Ⓐ Trumpetfish

DATE OF SURVEY

Fill in the date of the survey. If the survey spanned multiple days, enter the date of the first dive made.

Note: An **S Survey** should not exceed 30 days.

MO		DAY		YR	
0	0	0	0	0	0
1	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4		4	4	4
	5		5	5	5
	6		6	6	6
	7		7	7	7
	8		8	8	8
	9		9	9	9

TEMPERATURE

If you have an accurate thermometer, record the water temperature at the surface **[S]** and near the bottom **[B]**. **(S&A only)**

Note: Enter temperatures in degrees Fahrenheit.

S		B	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

BOTTOM TIME

Fill in the total number of minutes spent underwater for this survey.

For an **S Survey**, fill in the total number of minutes of bottom time for all the dives made during this survey.

MIN		
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

DIVE START

Fill in the time at the start of the dive to the nearest hour. **(S&A only)**

1 a.m.	9 a.m.	5 p.m.
2 a.m.	10 a.m.	6 p.m.
3 a.m.	11 a.m.	7 p.m.
4 a.m.	Noon	8 p.m.
5 a.m.	1 p.m.	9 p.m.
6 a.m.	2 p.m.	10 p.m.
7 a.m.	3 p.m.	11 p.m.
8 a.m.	4 p.m.	Midnight

VISIBILITY

Fill in the estimated or measured horizontal visibility where most of the survey was taken. **(S&A only)**

- under 10'
- 10' - 24'
- 25' - 49'
- 50' - 74'
- 75' - 99'
- 100' - 149'
- over 149'

AVERAGE DEPTH

Fill in the depth range where most of the survey was taken. **(S&A only)**

Snorkel	60' - 69'
under 10'	70' - 79'
10' - 19'	80' - 89'
20' - 29'	90' - 99'
30' - 39'	100' - 109'
40' - 49'	110' - 119'
50' - 59'	120' - 129'

CURRENT

Fill in the current encountered:

- Strong
- Weak
- None

Strong indicates a current that is difficult to swim against; **Weak** indicates a noticeable current, but one that does not seriously effect your dive; **None** indicates slight or no current. **(S&A only)**

HABITAT

Fill in the habitat over which a majority of the dive was made:

- Mixed
- High Profile Reef
- Low Profile Reef
- Sloping Dropoff
- Wall
- Ledge
- Grass
- Sand
- Rubble
- Artificial
- Open Water

Mixed is where a dive covers a variety of individual habitats. **High Profile Reef** is a reef where most coral structures rise four or more feet off the bottom. **Low Profile Reef** is a reef where most coral structures average less than four feet off the bottom. **Sloping Dropoff** is an angled slope dropping into open water. **Wall** is a shear dropoff of over 25 feet which faces open water. **Ledge** is a single or few sharp drops in bottom topography of three or more feet that may or may not face open water. **Grass** is where sea grasses are the predominant feature. **Sand** is where the bottom is mostly sand. **Rubble** is where broken coral, rock and gravel comprise the bulk of the bottom material. **Artificial Reef** includes ship wrecks, platforms, dumped debris or other artificially created habitats. **Open Water** is away from the reef in deep water where the bottom is not visible. **(S&A only)**

UNLISTED SPECIES

S F M A	
S F M A	
S F M A	
S F M A	
S F M A	
S F M A	
S F M A	
S F M A	
S F M A	

PLEASE DO NOT WRITE IN THIS AREA

0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
0 1 2 3	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

NOTE: Write any additional unlisted species on a separate piece of paper and reference the form number printed below.

PLEASE DO NOT WRITE IN THIS SHADED AREA

62815

What happens to the data that volunteers collect?

Once survey forms are submitted to Great American Fish Count (GAFC) staff, the Reef Environmental Education Foundation (REEF) scans the data and uploads it onto the GAFC web site at:

www.fishcount.org

A variety of reports can then be generated. In addition to use by the general public, the data are available to scientists and resource managers.

Previous applications or volunteer-generated fish survey data are:

Pattengill, C.V. and B.X. Semmens. Submitted. Analysis of volunteer-generated data in the Flower Garden Banks National Marine Sanctuary: how powerful is it? Journal of Gulf of Mexico Science.

Schmitt, E.F. and K.M. Sullivan. 1996. Analysis of a volunteer method for collecting fish presence and abundance data in the Florida Keys. Bulleting of Marine Science. 59:404-416.

Schmitt, E.F., compiler. 1996. Status of Reef Fished in the Florida Keys National Marine Sanctuary. The Nature Conservancy.

HIGH SCHOOL SALTMARSH WETLAND NURSERY PROGRAM

Operations Manual

Prepared by Tampa BayWatch, Inc.

HIGH SCHOOL SALTMARSH WETLAND NURSERY PROGRAM

Operations Manual

Prepared by
Tampa BayWatch, Inc.

May 1998

TAMPA BAYWATCH, INC.

Peter A. Clark
DIRECTOR

Robert E. Musser, Jr.
ENVIRONMENTAL SCIENTIST

Sari E. Schlossberg
ENVIRONMENTAL SPECIALIST

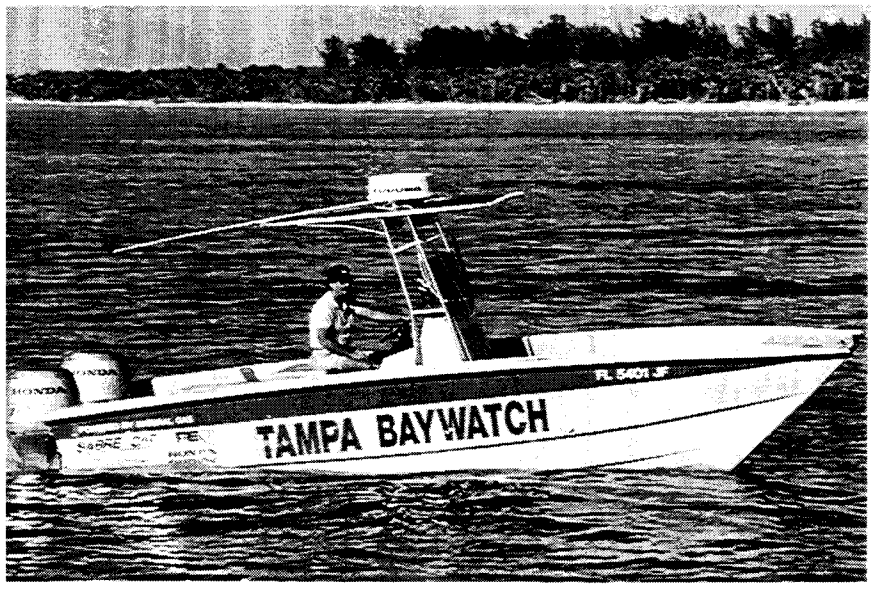
Tampa BayWatch can be reached by:

mail:	8401 9th St. N Suite 230-B St. Petersburg, FL 33705
phone:	813/896-5320
fax:	813/896-5325
e-mail:	TPBAYWATCH@aol.com

HIGH SCHOOL SALTMARSH WETLAND NURSERY PROGRAM
Operations Manual

CONTENTS

printed on recycled paper



TAMPA BAYWATCH, INC.

Board of Directors
1998

Mr. Edwin Alber
CHAIRMAN

Mr. Robert Vaughan
VICE-CHAIRMAN

Ms. Nadine Smith
SECRETARY/TREASURER

Dr. Harvey Partridge

Mr. Reginald Roundtree

Mr. Sean W. Scott

Ms. Laura Vaughan

Mr. Steve McCreary

Ms. Paige Catani

PREFACE

HABITAT RESTORATION ACTIVITIES

Most scientists agree that the key to improving the health of ailing water bodies along the nation's coast is to focus on improving water quality, and restoring fish and wildlife habitat. Wetland vegetation (salt marsh plants, seagrasses, mangroves, etc.) serves as a natural biological filter which removes many impurities in coastal waterways, as well as providing valuable areas of nursery, spawning, foraging and refuge habitat for fish and wildlife. To this end, many habitat restoration activities are taking place around the nation.

To learn about on-going restoration activities in your area, contact your local environmental protection organization, the United States Environmental Protection Agency, a National Estuary Program, Restore America's Estuaries program, or look for local groups that may be able to provide additional guidance.

ABOUT TAMPA BAYWATCH, INC.

Tampa BayWatch, established in 1993 as an adopted 501(c)(3) nonprofit organization, is dedicated to the scientific and charitable purpose of monitoring, protecting, and restoring the marine and wetland environments of Tampa Bay. Tampa BayWatch utilizes trained professional staff to monitor and protect the bay, and to serve as a conduit for community participation in bay restoration and protection activities. Our program seeks to build citizen awareness, concern and participation through educational outreach. It is important to the recovery of our estuary that Tampa BayWatch assists our community in recognizing and seizing every opportunity to improve water quality and restore and protect habitat.

The first organization of its kind in the southeastern United States, and the only stewardship program for the Tampa Bay estuary, the Tampa BayWatch program, over the past five years, has:

- coordinated the construction of saltmarsh wetland nurseries in six area high schools to promote student involvement in regional habitat restoration programs;
- coordinated more than 4,600 community volunteers who have:
  - planted 220,000 saltmarsh grasses in habitat restoration projects;
  - cleared 65 colonial bird nesting islands of deadly monofilament fishing line on an annual basis;
  - removed in excess of 28 tons of marine debris from the bay's shorelines;
- designed and constructed the nation's first natural gas powered boat, now in service as Tampa BayWatch's flagship monitoring vessel.

Involving our youth in this effort to restore and protect Tampa Bay is an especially effective long-term way to mobilize our community around our mission. More information about the Tampa BayWatch program can be found at our web site; go to http://www.arch.usf.edu/ficus/conserve/default.htm and then click on Tampa BayWatch.

SUMMARY

Habitat restoration projects have become an increasingly popular tool to restore coastal communities, enhance fish and wildlife resources, and to promote public involvement and education. In the Tampa Bay region we have numerous restoration programs initiated to restore the coastal environments. Tampa BayWatch builds upon the activities of many governmental agencies by helping to coordinate citizen volunteers willing and able to provide a volunteer labor force for planting activities. Communication with bay restorers has identified that there are numerous projects now, and in the future, available to receive the plants and volunteers generated through the coastal nursery program.

Communication is also the key for Tampa BayWatch to reach other interested citizens, educate them, and enable them to begin or join their own area's restoration projects. It does not matter if you live by San Francisco Bay, Puget Sound, Long Island Sound, or Tampa Bay, they all need to be valued, protected and restored.

HIGH SCHOOL WETLAND NURSERY PROGRAM SPONSORS

Support for the High School Wetland Nursery Program Operations Manual was provided by Publix Supermarkets. Our prototype wetland nursery was constructed under a mini-grant from the Tampa Bay National Estuary Program. Four additional wetland nurseries were started in Hillsborough County with the support from the Gardinier Settlement Trust Fund (administered by the Environmental Protection Commission of Hillsborough County and the Florida Department of Environmental Protection) and Publix Supermarkets.

The Wetland Nursery Program has also received support from the Habitat Conservation Division of the National Marine Fisheries Services and the Environmental Protection Agency. We greatly appreciate the support provided to Tampa BayWatch in order to accomplish our youth programs in Tampa Bay. Tampa BayWatch facilitates habitat restoration activities in Tampa Bay through the Restore America's Estuary program with a grant from the Pew Charitable Trusts.

Peter A. Clark
Director, Tampa BayWatch
May 1998

INTRODUCTION

Tampa BayWatch coordinates the establishment of saltmarsh plant nurseries by secondary school ecology and science clubs around Tampa Bay, Florida. The nurseries provide a source of native wetland plants to be used in habitat restoration projects in the Bay area. Our high school program teaches students the value of maintaining a healthy environment while promoting public education and hands-on involvement in habitat restoration activities. This operations manual is a reference guide to be used by students and teachers who are interested in constructing a salt marsh nursery.

Estuaries are extremely productive ecosystems where saltwater from the ocean meets freshwater from inflowing rivers and streams in a semi-enclosed coastal body of water. The blend of bay environments—ranging from underwater seagrass meadows to surrounding intertidal salt marshes, mangrove forests and uplands—provides food and shelter for a multitude of wildlife and marine species.

Saltmarsh plants act as a filtering agent for stormwater runoff and serve as a vital link in the marine food web. These marshes, which periodically become submerged with the rise and fall of tides, support crabs, shrimp, snails, mussels, juvenile fish and a variety of birds. Salt marshes also stabilize shorelines and buffer uplands from storms. However, coastal wetlands, including salt marshes, throughout the nation have suffered extensive losses. The loss of coastal wetland habitats has resulted in major declines in fisheries and wildlife that depend on these habitats for all or a portion of their life cycle.

Restoration activities have become an increasingly popular tool to revitalize saltmarsh and mangrove communities by regrading shoreline elevations and planting native vegetation that will mimic natural communities. These restoration projects also give the public an opportunity to take an active role in restoring the environment while promoting education of volunteers on the bay's problems and solutions.

PROGRAM DESCRIPTION

Tampa BayWatch supports large-scale habitat restoration efforts by facilitating the construction of saltmarsh nurseries at the bay region's high schools. One of our goals is to extend the program concept by distributing this operations manual to schools nationwide. Establishing these nurseries has provided an excellent educational resource for teaching students about ecological and agricultural practices. The students become familiar with the life cycle of the plants they are growing and the importance of the estuarine ecosystem.

The nurseries also provide an inexpensive source of native wetland plants for the restoration projects currently being accomplished by many federal, state, county and city environmental departments. With many restoration projects being planned, saltmarsh plants are in constant demand. By raising the plants to maturity in our own nurseries, many expenses are curtailed and the cost of a planting project to government agencies is lowered significantly.

The coastal plant nursery also provides a volunteer base for implementation of restoration projects. This program in particular promotes student involvement in community-based restoration activities. With guidance from local scientists, the students maintain the nursery and monitor their plants by performing salinity tests, recording growth rates, conducting routine maintenance and documenting other pertinent information.

Outside technical support from individuals or agencies that have had prior experience transplanting marsh grasses, such as that provided by Tampa BayWatch, is highly recommended. This will be helpful when applying for the permits that are often needed when conducting a restoration project. This support can also be useful to make sure the plants are installed in a viable location.

MATERIALS AND METHODS

The school must have a site to accommodate a 16' × 16' nursery (plus surrounding work space) that is secure and located near a fresh water source. Once a site is chosen, wood boards are placed on the ground to form a 16' × 16' growing area. Plastic pond liner material is laid over the nursery to help hold the water. Plugs of native *Spartina alterniflora*— more commonly called smooth cordgrass—are planted in peat pots containing a mix of beach sand and peat, and placed in trays within the nursery. The pond should be flooded one to two times each week using a timer irrigation system. Salt is added to the irrigation water as needed to mimic natural conditions.

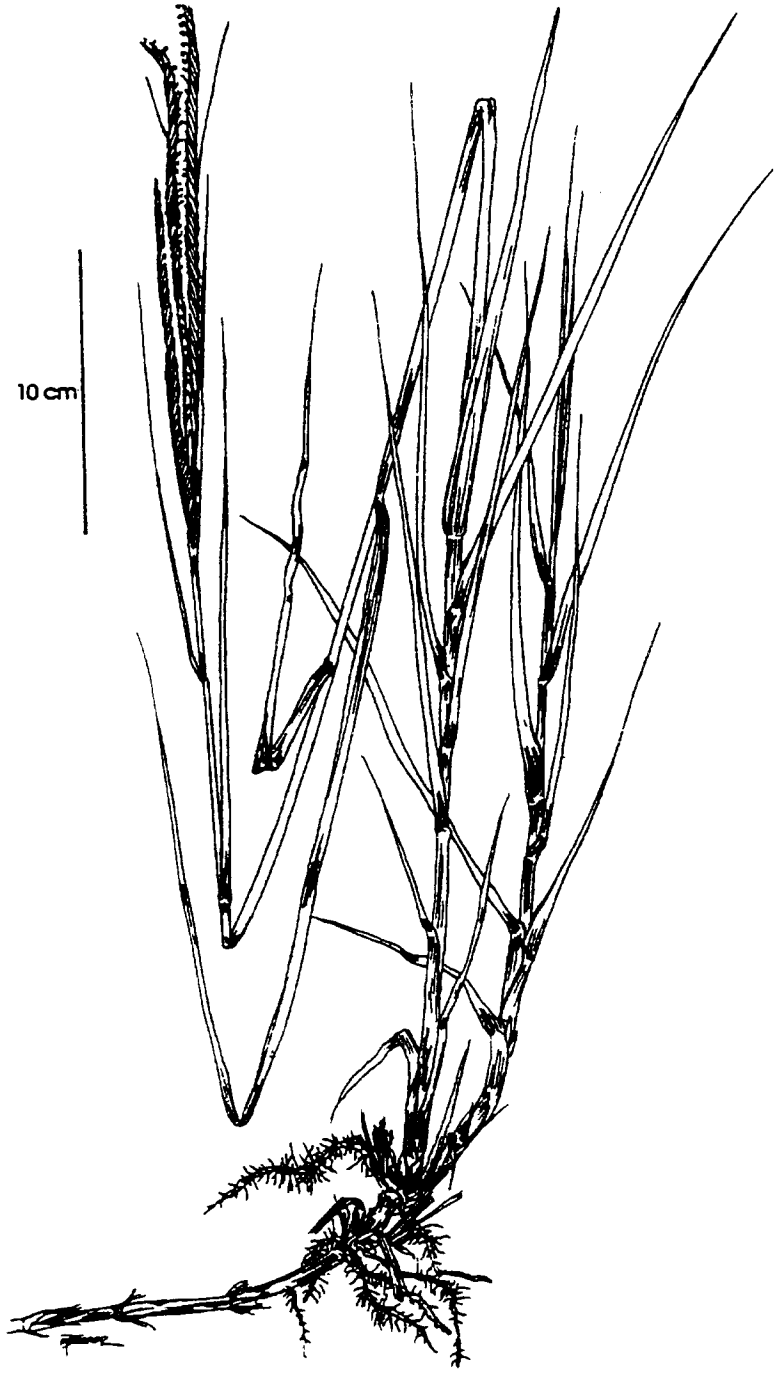
Many of the materials, such as the pond liner and the smooth cordgrass plants, can be donated or purchased through a grant. Some carpentry or home improvement stores may be willing to donate materials for the nursery. Government environmental agencies or local corporations may also have grants available. Grants can be further researched at your local library.

▪ Site Location and Preparation

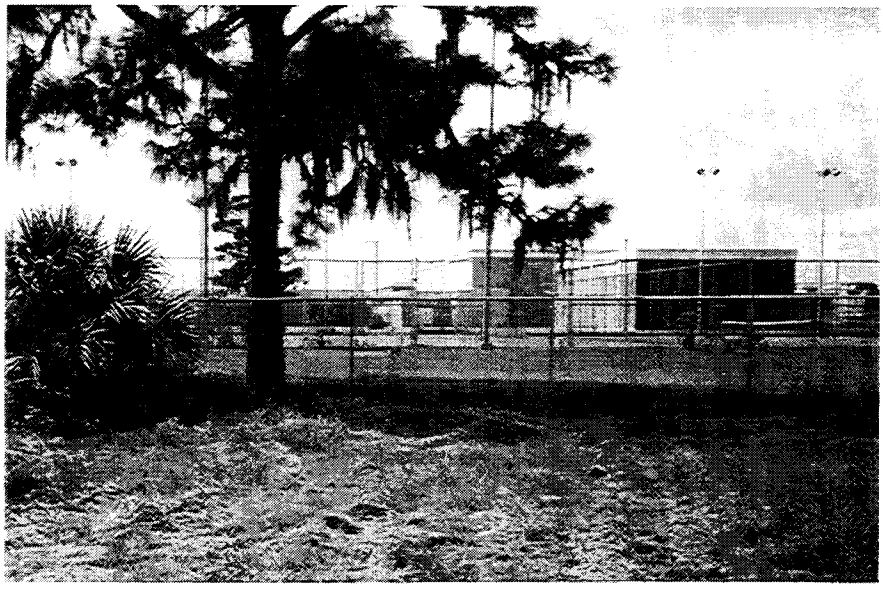
The location of the nursery and preparation of the site is crucial to the success of the project. Like many plants, saltmarsh grasses need plenty of sunshine to grow. An open area, without overhanging trees or rooftops, is an excellent spot to build the nursery. Another point to keep in mind is the water source for the irrigation system. You should build the nursery as close as possible to this source.

It is critical that the proper nursery location is selected. The site must:

1. be flat (level) to prevent dry spots or flooding;
2. not contain any sharp or pointed objects such as rocks or sticks that could puncture the liner;
3. have a water source nearby; and
4. be in a secure area to prevent vandalism and unintentional impacts (i.e. stray animals, losing football teams, runoff from nearby roofs, etc.).



Smooth cordgrass, *Spartina alterniflora*
(illustration from *An Introduction to Planting and Maintaining Selected Common Coastal Plants in Florida*, Florida Sea Grant Report No. 97, M.R. Barnett and D.W. Crewz, eds.)



A good location for your nursery is important.

▪ Construction Supplies

Here is a sample list of the supplies you will need to construct a single 16' × 16' nursery:

- ☐ liner, preferably PVC or HDPE (30 mil or greater), 18' × 18'
- ☐ eight 4"× 4" × 8' pressure-treated wood posts
- ☐ eight 1" × 2" × 8' pressure-treated wood strips
- ☐ one battery-operated digital water timer
- ☐ approximately 8 cu. ft. of peat moss
- ☐ 4 cu. ft. of vermiculite
- ☐ soil and sand mixture, which you probably can get from your nursery site, or beach sand works great
- ☐ fungicide (such as Ortho® Multi-Purpose Fungicide Daconil 2787®)
- ☐ fertilizer (such as All-Purpose Miracle Gro®)
- ☐ one box (one lb.) of 8D galvanized common nails
- ☐ one box (one lb.) of 6D galvanized nails (for the 1" × 2" × 8' wood strips)
- ☐ four 1½" × 2¾" metal angle straps
- ☐ four 6" × 6" L metal straps
- ☐ eight 9" metal strap ties
- ☐ PVC pipe (sch. 40), connectors, primer/cleaner, and PVC cement for irrigation system

- ☐ approximately 5,000 2¼" square × 4" deep jiffy peat pots
- ☐ 120 rooting trays, to hold approximately 45 peat pots each (these are black plastic, with ridges and holes on the bottom, usually about 10" × 20")
- ☐ Salt (such as Instant Ocean® or other brand), amount for 50 gal. (available at pet and aquarium stores)

Tools you will probably need:

- ☐ 2 or 3 rakes
- ☐ 3'-long level
- ☐ ground tamper
- ☐ 2 or 3 shovels
- ☐ hammers
- ☐ 20-gallon muck buckets
- ☐ PVC cutter
- ☐ clippers/scissors
- ☐ batteries (for timer)
- ☐ drill and bits
- ☐ work tables
- ☐ garden hose
- ☐ instrument for reading salinity (such as a refractometer)

You may find that your nursery requires different amounts of one item or another, so you should plan the construction before you actually begin to build.

▪ Pond Construction

After you have selected a good, level and secure location and have removed rocks and other debris, you are ready to begin constructing the pond.

To construct the pond:

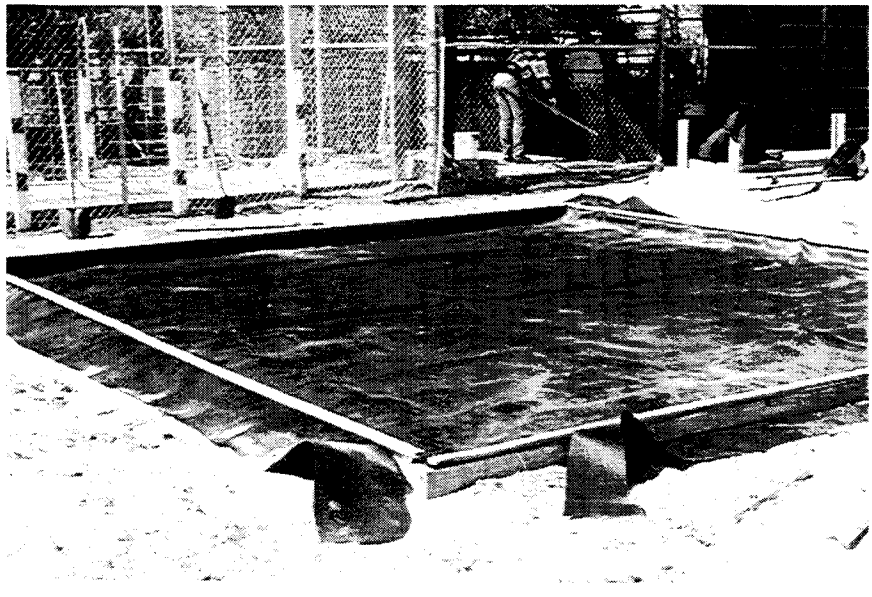
1. Level the ground with rakes and remove any debris. **This is very important to prevent damage to the liner.**
2. Using the 4" × 4" × 8' posts, outline a square area on the ground measuring 16' × 16'.
3. Join the boards together using the flat strapping connectors between the posts and angle connectors on the corners.
4. Cover the pond area with the pond liner. Start at one

side of the pond and pull the liner over the entire pond. Make sure extra liner is laid on top of the posts. It might help to walk along the inside edge of the nursery to flatten the liner and help make a better fit.

Placing the 4" × 4" × 8' posts in a square

Walk around the inside edge of the nursery to flatten the liner.

Putting the wood strips on top of the liner, ready to start nailing in place



After nailing in place, you can cut away the excess liner material.

5. Place 1" × 2" × 8' wood strips over the plastic on the top surface of the posts and nail in place. **Important:** Keep the liner loose before nailing it down. If it is too tight then the weight of the water and plant trays will stretch and eventually tear the liner.

▪ Irrigation System

In order to provide water for the nursery, some basic irrigation work will be needed. A maintenance worker familiar with the water or sprinkler system should be consulted to help with this part of the construction. However, actual construction of the irrigation system should be done after the pond is built, since minor adjustments are often necessary to correctly position the pipes.

The size of the PVC pipe and connectors will depend on the water source to be used. If you are connecting directly to a relatively large source, such as a reclaimed water main, large-diameter (1") pipe and corresponding connectors will be necessary to prevent excessive pressure on the PVC. If the source is smaller, such as the school's irrigation system, then smaller-diameter (½" or ¾") pipe and connectors may be used. PVC primer/cleaner and cement are used to connect the pipes. Bury the pipeline to prevent unintentional breaks from foot traffic or lawn mowing. If constructing in an area subject to freezing weather, be sure to bury below the frost line.

Once the water is brought to the pond, you want it to flow into the bottom of the pond so the plants can take up the water through their roots. This type of flow also helps prevent fungus from growing on the blades of the plants, and less water will be lost from the nursery through evaporation, thus conserving water. An easy way to design this is to place 14' of PVC pipe with evenly spaced, drilled holes pointed slightly downward, on the bottom of the pond along one side wall.

The next step is to install a water timer, such as a battery-operated timer (unless your school already has other power sources available), to control the frequency and length of irrigation. We recommend a digital water timer due to its ease of programming, maintenance and reliability. Initially you should program the timer to have the water come on one day a week for approximately 15 minutes, but the water level should be periodically monitored and adjusted accordingly.

Summary of irrigation system:

1. Identify a water source
2. Determine size of PVC pipe

3. Construct irrigation system
4. Set up water timer

Installing the water timer

▪ Planting

It is possible to get the rooting trays, peat pots, and other supplies donated, sold at reduced rates from local nurseries, or purchased through a grant. The soil and sand can probably be found on your school grounds. For the plant pots we recommend 2¼" (square tops) × 4" (deep) × 12 (in a cluster) peat pots. The *Spartina alterniflora* can be bought from a local nursery or your school may have to obtain permission through government agencies, such as the state environmental department, to collect the smooth cordgrass from an approved donor site. A manageable number to start with is about 5,000 plants. The process of obtaining smooth cordgrass to start the nursery should be a one-time procedure. Ideally, after initially stocking the nursery, it can be recycled, always keeping enough smooth cordgrass to begin a new growth cycle while still donating a sufficient number of plants to restoration projects.

Once the supplies are ready, students should work in three teams—soil mixers, plant separators, and potters.

An assembly line makes planting go faster and smoother.

Preparing to plant the nursery: plant separators in the foreground, potters in the middle, and soil mixers in the background

Soil Mixers

Because the natural soil that salt marsh grows in is a mixture of sand and organic material, the students will need to mix equal parts of soil (school yard soil or purchased peat) and sand (preferably beach sand). Water and a small amount of vermiculite should be added until the mixture has the consistency of cooked oatmeal. It is best to mix the mud in

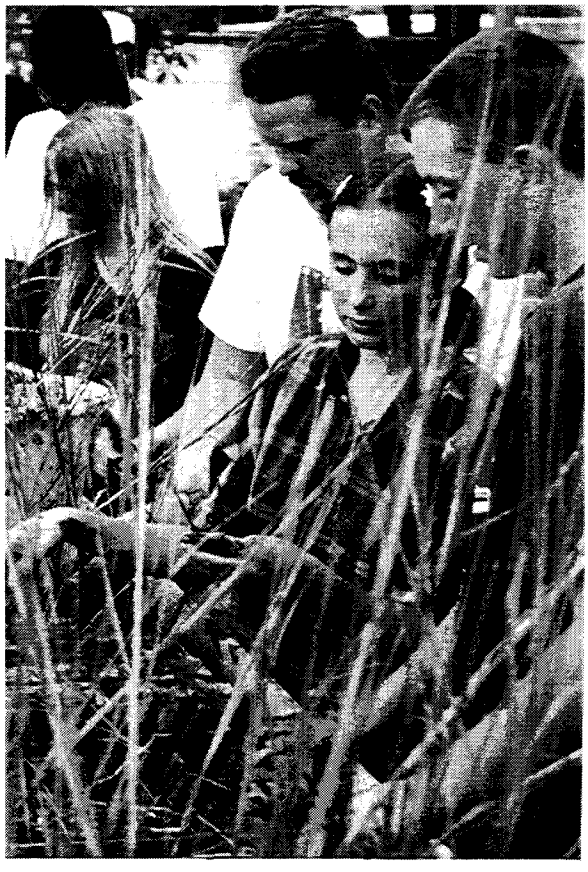
large buckets, such as 20-gallon plastic tubs. The soil should be mixed thoroughly, with no uneven clumps in the mud.

Plant Separators
Before placing the cordgrass into the rooting trays, the plants need to be separated into individual units with good roots. **The plants should be handled with extreme care!** It can be difficult to separate the roots, since they are often intertwined around each other. Great care should be given to **preserve the maximum number of roots** so that the plant will be able to anchor itself and also take up water and nutrients. Keeping the units moist will make it easier to separate the plants and prevent root damage. A group of dedicated separators can divide up the plants into piles to ease putting individual units into the peat pots.

Potters
The potters are in charge of placing the individual plants into the peat pots, which first should be put into the rooting trays. Before the plants are put in, fill about one inch of the pot with soil mixture. Then put the plant in the cell and cover with soil up to the top. This will allow the soil to consolidate and rain water will soak in from the top. After all of the pots in a cluster are filled with plants, trim off about 6"–8" off the top blades (depending on the height) of the *Spartina alterniflora* plant. Cutting the top blades of the plant will stimulate roots to grow quicker. The plants should be about 10"–12" tall after trimming.

Now *carefully* place the trays in the pond, beginning about 6" away from the edge of the perimeter of the pond to reduce the stress on the liner. After all the trays have been filled and set into the pond, you can flood the pond with water.

While the pond is filling, add enough sea salt to bring the salinity to approximately 10–15 parts per thousand (you will need a refractometer or salinity meter to check the salt concentration). A bag of salt for 50 gallons of water is usually sufficient. Check the salinity after a few minutes have passed and the salt has dissolved. It's a good idea to mix the water and salt to help it disperse evenly. If too much salt was added, add some more water. If salinity is too low, add more salt.



Putting the plants in individual pots, before trimming

These plants are being trimmed after being placed in the nursery (the ones on the right have already been trimmed).

Also while the pond is filling, add fertilizer (see fertilizer box for determining amount). This amount is dependent on the total area of the pond and you should adjust the amount accordingly. Two pounds is usually enough for a 16' × 16' nursery.

OPERATION AND MAINTENANCE

Maintaining the saltmarsh nursery is vital to the plants' survival. The salinity and water use must be monitored on a regular basis to ensure that the plants stay healthy. By taking care of the nursery and observing growth cycles, students gain knowledge about the intricacies of the growth and restoration process.

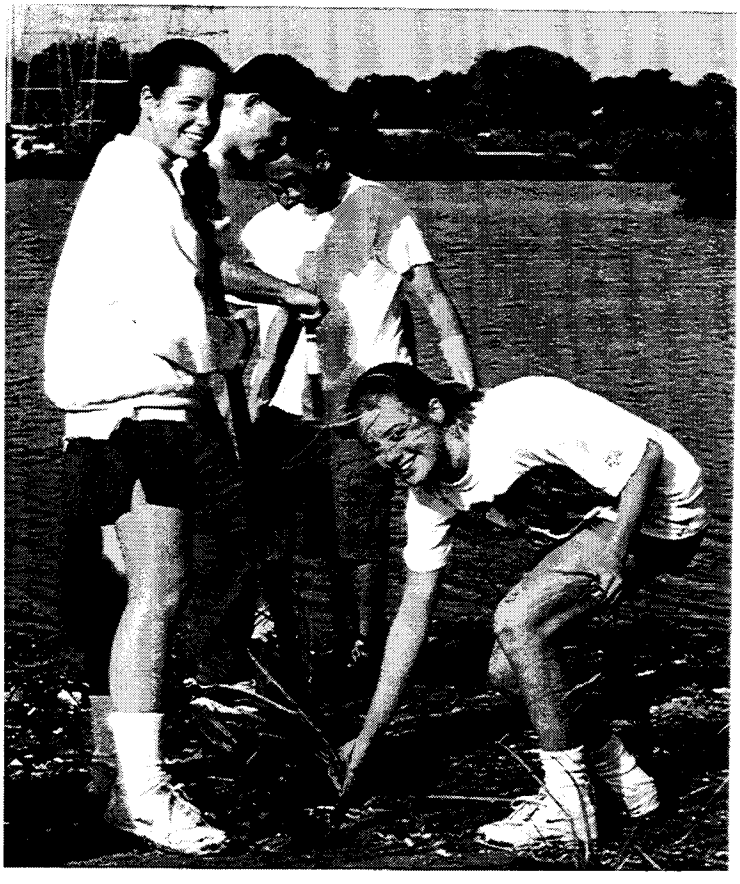
Some important factors to remember throughout your project:

- Salinity should be maintained at 10–15 ppt (parts per thousand) for at least two months prior to transplanting. *Spartina alterniflora* is a halophytic plant, which means that it does best in brackish water, or salty conditions. Too much or too little salt will result in poor growth and reproduction cycles. Salinity should be monitored at least once a month, and can be monitored as often as every day.

- Water usage should be monitored on a regular basis to determine the needs of the nursery. It is acceptable to let the nursery dry between watering cycles, but not for more than one week in duration. The nursery can be filled with water once a week; the water level will decrease during the week, sort of mimicking a high and low tide cycle. The nursery can be allowed to dry out for 2 or 3 weeks prior to transplanting, to aid in harvesting.

- Weeds may sprout initially within the nursery, but the added salt should keep them under control. Most weeds are freshwater plants and cannot tolerate salt, so the salt will reduce the growth of weeds.

- If rust (a reddish leaf fungus) develops on the grass blades, spray them lightly with a copper-based fungicide (or Daconil 2787®) on the plants.



Countryside High School students install saltmarsh grass into new tidal ponds at Mobbly Bay, Florida.

TRANSPLANTING

The school's nursery should be ready for a harvest six to eight months after planting. Tampa BayWatch tries to schedule plantings in the fall or spring of the school year. A third to a half of the nursery should be saved and the plants divided into individual sprigs and replanted into the nursery for another growing cycle. The remainder of the plants should be ready for use in a restoration project.

Transplanting procedures must incorporate three aspects in order to be successful and ensure optimum usage of vegetation—selection of a suitable site, determination of an appropriate tide, and transplanting into a restoration project. After the smooth cordgrass plants have been allowed to mature in the nursery for approximately six to eight months, they

should be ready to be planted in a saltmarsh restoration project.

■ Selection of a Suitable Site

Ideally, a calm backwater area should be chosen as the restoration site. Boat and human traffic needs to be minimal. Wave action should be at a minimum to prevent erosion of the newly transplanted cordgrass. The shoreline area needs to have a gradual slope.

The optimum elevation that *Spartina alterniflora* salt marsh grows at is +0.5' to 1.8' MLW (Mean Low Water). Plants need to be installed within this range or they will have too much or too little water.

Most schools will find it easier to participate in an ongoing restoration project. Check with your local environmental protection agency, the National Estuary Program, Restore America's Estuaries, or other environmental organizations for information on restoration projects near your school. This partnership can provide helpful technical and educational support.

■ Selection of a Tide

Planting events need to take advantage of lower tides (below +0.5' MLW) so that volunteers are planting along dry shorelines. Local tide tables can be consulted to determine the time and date of these low tides at the restoration site.

■ Planting

Here is a typical planting equipment list for a one-acre site:

- ☐ 5,000 plants
- ☐ 20–30 students
- ☐ 10–15 shovels or dibble bars
- ☐ planting lines (any kind of rope or string)
- ☐ 10 lbs. granular Osmocote fertilizer
- ☐ fertilizer buckets
- ☐ food and water for planters

The planting lines are placed along the contours of the tidal flow. (The contours are usually visible as color variations or accumulation of debris along the shoreline.) The planting rows should be about 2–3 feet apart from each other. This spacing allows for optimal growth of each plant. Holes approximately 2–3 feet apart should be dug along the planting lines. To form the planting lines, you can lay the rope or string down on the ground, or use a shovel and draw the line in the sand.

Planting a restoration site on Tampa Bay

For the planting of the restoration site, the student volunteers are organized into groups of three or four. One member of the group will dig a hole along the planting line, about 1"– 2" in diameter and 3"–4" deep. Another member will place 1 tsp. of Osmocote fertilizer in the bottom of the hole (this stimulates root growth). The next team member places the cordgrass plant in the hole and the last student fills it in. It is important that the top of the soil of the *Spartina* plug be level with the ground in which it is being planted. Pat the ground firmly around the new plant to prevent it from floating away on the next high tide, but do not press the plant too far down into the soil. Be sure all roots are covered. Remember—green side up, root side down!

CONCLUSION

Once the nursery has been harvested, transplanted and recycled, the students will have come full-circle with the program. However, the learning does not have to end here. Teachers can incorporate this program into the classroom: follow-up projects can be developed; questions may be included on exams, and individual research papers can be based on the High School Wetland Nursery Program.

Students should be encouraged to monitor their work over the year. They can monitor growth rates of the plants, and see the marine organisms and other wildlife that make the marsh their home. Students should feel proud of the newly created habitat that was developed with their help, and that hopefully will remain protected and preserved for years to come.

This restoration project in Pinellas County (Florida) was planted by Lakewood High School in May 1995; this photograph was taken a year later.

T • A • M • P • A

BAYWATCH

A Stewardship Program

≈ for Tampa Bay ≈

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Tools for Volunteer Coordinators

Look here for links to volunteer discussion groups, list serves, management tools, electronic newsletters and other resources.

Discussion Groups & List Serves

Coasthuggers Discussion Group
Volunteering for the Coast's Web-based discussion group. Network with other coastal volunteer coordinators to share experiences, exchange ideas, and learn from one other.

Discussion Group for Government-based Volunteer Programs
News about training workshops for volunteer managers, Web-based resources, and a discussion group for government supported volunteer programs (Points of Light Foundation).

International Discussion Groups
Access a library of resources, specialty on-line bookstore, and international volunteerism discussion groups (Energize, Inc.).

Volunteer Coordinator Discussion Group
Network with volunteer coordinators in other disciplines as they struggle with day-to-day issues (CyberVPM).

Tools & Resources

Volunteer Tracking Software
Find software designed to help you track volunteers.

Library
Look here for books, software, professional organizations, training courses, and Internet resources (CyberVPM).

Cool Tools
Free tools for your Web site, including how to use the Internet to find the information you need (CyberVPM).

Self Care
Are you at risk for burnout? This section contains information on stress management and taking care of you (CyberVPM).

"Giving and Volunteering in the United States"
A comprehensive publication about the current level of volunteerism in the United States (The Independent Sector, $20/copy).

Resources Directory for Educators
Directory of educational resources designed to teach the public, particularly children, to be stewards of the coastline (California Coastal Commission). (pdf, 126k)

Creating Coastal Stewardship
Access information about "Connect America," a movement for creating stewardship through volunteerism. The site also provides links to regional volunteer centers, awards, and training services (Points of Light Foundation).

Electronic Newsletters

"Volunteer Today"
A monthly electronic gazette for volunteer managers containing articles about volunteer recruiting, retention, and training. You can also submit questions to an experienced volunteer management consultant.

Volunteer Management Newsletter
Sign up for a free monthly electronic newsletter about volunteer management (CyberVPM.com).

Improving Volunteerism
Promote professionalism and strengthen leadership in volunteerism. The site offers information about membership, awards, and an on-line volunteer journal (Association for Volunteer Administration).

(top) **RETURN**

RESOURCES FOR EDUCATORS

THE CALIFORNIA COASTAL COMMISSION

The California Coastal Commission is a state agency that works to protect California's coastal and marine resources. The educational arm of the Coastal Commission, known as the "Adopt-A-Beach Program" supports the agency's mission by providing programs and resources that teach the public, particularly children, to be stewards of our beaches and ocean. The following resources are available free of charge by using the attached request form or by calling 800-COAST-4U or by email at coast4U@coastal.ca.gov. More information is also available on our website, <http://ceres.ca.gov/coastalcomm/>.

ADOPT-A-BEACH

The Adopt-A-Beach name also referes to our year 'round beach cleanups that take place throughout the state. In order to "adopt" a local beach, volunteers agree to clean the beach at least three times a year (we will accept school groups that can only make it out for one day). Thousands of civic organizations and schools have taken advantage of this opportunity to be a part of the solution to ocean pollution. The program is free, recycling bags and trash bags are provided.

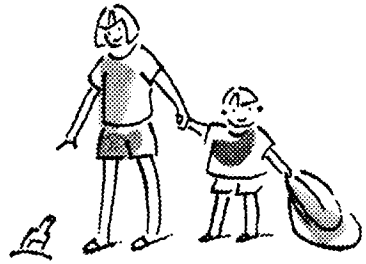
Children's Poster Art Contest
The Coastal Commission plans to hold the 2nd Annual Children's Poster Art Contest sponsored by the PacBell Pioneers this fall! All K-6 grader students are invited to submit art. The Commission anticipates that the contest will run from August through mid-October, 1999. Please contact us for more information.
Request Item - AAB CON

COASTAL CLEANUP DAY

Every year on Coastal Cleanup Day, hundreds of thousands of people worldwide collect debris and fill out data cards that track the types of litter collected from our beaches and waterways. This data is compiled to form a powerful statement about the quality of our oceans. In California, the cleanup takes place at over 600 sites from San Diego to the Oregon border and as far inland as Lake Tahoe. The broad scope of Cleanup Day demonstrates that marine debris and ocean pollution are watershed problems, and that litter in your neighborhood may eventually end up in the ocean. **The next Coastal Cleanup Day will be held on Saturday, September 18, 19989 and will be presented by Brita.**

SAVE OUR SEAS CURRICULUM

Save Our Seas is a marine curriculum of hands-on activities to help students understand the effects of marine debris on coastal wildlife and habitats. It is designed for K-12th grades, and can be used in conjunction with a beach cleanup. Teacher trainings, school assemblies and classroom speakers are also available in some areas. Call for more information.
Request Item - SOS



MARINE & COASTAL EDUCATIONAL RESOURCES DIRECTORIES

San Francisco & Monterey Areas, 1996
South Central California Areas (From San Luis Obispo south to Northwest Los Angeles County), 1995

The Marine & Coastal Educational Resources Directories are designed for anybody interested in learning about the marine and coastal environment. The directories describe and list organizations that offer marine education programs and other resources to the public.
Request Item MCERD - SFM (San Francisco & Monterey)
Request Item MCERD - SCC (South Central California)

COMPENDIUM FOR NATURAL COMMUNITIES

The compendium is an easy-to-use guide to materials focusing on natural communities and was developed to assist educators in their selection of materials appropriate for classroom use. The compendium lists both descriptive and evaluative information on each curriculum reviewed.
Request Item - COMP

LOAN LIBRARY

The following videos and slide shows are available for rental. They are available for two-week period and a $25 charge is applied for all videos not returned.

Slide Shows:
Marine Entanglement - Script provided, an excellent introduction to marine debris. (please review slides before showing, some depicts dead animals entangled in marine debris that may disturb younger students).
Request Item - SS/ME

Coastal Cleanup - Script provided, an excellent motivator to promote participation in the Adopt-A-Beach program and Coastal Cleanup Day.
Request Item - SS/CC

Videos:
Saving Inky - 20:25 min. running time. A video for all ages about a pygmy sperm whale that ingested plastics from the ocean, was treated at the Baltimore Aquarium and then set free.
Order item - VID/SI

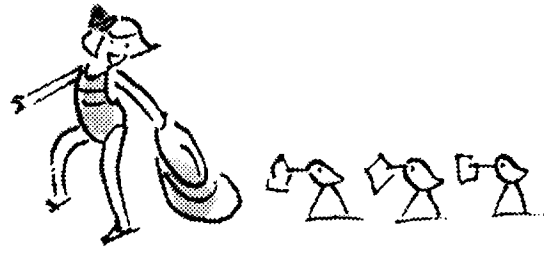
Trashing the Oceans - 8 min. running time. An introduction to marine debris, very similar to the Marine Entanglement slide show. **Request Item - VID/TTO**

Troubled Waters: Plastic in the Marine Environment - 28:30 min. running time.
Request Item - VID/TW

Kids by the Bay - 19 minutes running time, for grades K-5. Show illustrates how kids can pitch in and restore the environment.
Request Item - VID/KBTB

SAVE OUR SEAS SEAL POSTER

Educational poster illustrating the problems that marine debris pose for marine animals.
Request Item - SEAL



Request Form

Name _____

Organization/School _____

_____

Address _____

City/State/Zip _____

Phone _____

❑ I would like an application for the Adopt-A-Beach Program.

❑ I would like a brochure for the 15th Annual California Coastal Cleanup Day.

Request Item	Quantity

Return Request Form to:
California Coastal Commission
Adopt-A-Beach Program
PO Box 192242
San Francisco, CA 94119-2242
(800) COAST-4U

Limit two videos or slide shows per order. Please allow two weeks for delivery (You will be notified if your request is not available, please include phone number). Reminder: there will be a $25 charge for all unreturned/damaged videos.

California Coastal Commission
Adopt-A-Beach Program
PO Box 192242
San Francisco, CA 94119-2242
(800) COAST-4U

Coastal and Marine Educational Resources for Educators

California Coastal Commission

25 Years of Protecting California's Coast and Ocean

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Becoming a Volunteer

Interested in volunteering? Visit these Web sites for kids and adults.

For Kids

Earth to Kids
Environmental projects for kids (Environmental Defense).

Explorer Club
Environmental games, art, and activities for kids (EPA).

Student Center
One-stop environmental information source for students (EPA).

Center for Marine Conservation
A "wading pool" for kids to learn about ocean critters.

For Adults

American Oceans Campaign
Action you can take to protect the oceans.

Center for Marine Conservation
Learn about action you can take to protect the ocean.

Surfrider Foundation
Tips on what you can do to preserve our oceans, waves, and beaches.

Environmental Defense (formerly Environmental Defense Fund)
Strategies for individual action.

Clean Ocean Action
Get involved in protecting the marine environment, including information about local legislation (New York and New Jersey).

Adopt Your Watershed
Information about your local watershed, including links to groups in your area, and tips about ways to get involved (EPA).

Resources for Volunteers
Why volunteer? What are the trends for volunteerism in America? Where can

you find new volunteer opportunities? (CyberVPM).

Concerned Citizens

Become familiar with environmental issues and potential environmental and human health risks caused by pollution. Learn how you, your family, and your community can protect the environment (EPA).

Starting Out in Volunteer Water Monitoring

Interested in monitoring a local water body, river, lake, stream or coast? Learn how to get started with or without an organization (EPA).

(top) **RETURN**

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Finding Coastal Volunteer Opportunities

Looking for a volunteer opportunity in your state? Visit the Coastal Volunteer Network or browse these sites to find organizations that need volunteers.

United States

Ocean Groups
List of ocean and water organizations by state (American Oceans Campaign).

National Directory of Volunteer Monitoring Programs
Search this database by state or name to look up (and add) any monitoring program (EPA).

Monitoring Groups On-Line
Existing monitoring groups across the country.

Surfrider Foundation
Locate any of the Surfrider's dozens of chapters, each with their own volunteer opportunities.

California

Monterey Bay National Marine Sanctuary (California)
Volunteer opportunities are listed.

Florida

Florida Keys National Marine Sanctuary (Florida)
Volunteer opportunities are listed.

Washington

Watch over Washington
This site supports and provides information to statewide volunteer monitors to help them collect better information (Governor's Council on Environmental Education).

(top) RETURN

Anacostia Watershed Society: Respecting Coastal Stewards

How do you take first-time volunteers and turn them into committed coastal stewards? By respecting their time and efforts, according to the Anacostia Watershed Society.

"If a person takes time out of their life to help you with something you care very strongly about, that's special," says Robert Boone, president of the Society. "I try to drive home to our volunteers that their being here is important, and that they make a difference and are appreciated."

Washington, DC students participate in an canoe tour. The Anacostia Watershed Society takes many school groups to see the river to inspire the students to help clean it up.

Boone started the Society in 1989 to motivate the community to clean up the heavily polluted Anacostia River. The Anacostia flows through metropolitan Washington, DC and joins the Potomac River before emptying into the Chesapeake Bay. Trash from the surrounding urban neighborhoods have made the river so polluted that at one time swimming in it was considered a health hazard.

Today, four staff members help Boone coordinate river cleanups, tree plantings, and storm drain stenciling projects from the Society's office in Bladensburg, Maryland. Jane McGlade, development director at the Society, shares Boone's respect for the volunteers and plans Society events according to how the volunteers want to contribute.

McGlade says that planning an enjoyable experience for the volunteers means asking them to work no more than a few hours each time they come out. "We learned from the first cleanups that volunteers like to start in the morning and end by lunch. We know that an entire day of work is too much for a volunteer."

The Society also plans fun activities for the volunteers to thank them for their hard work. After an intense morning river cleanup, volunteers at the 1999 Earth Day Celebration used the trash they collected earlier in the day to create works of art. "We plan fun activities like the trash sculpture contest because *we know*

that if the volunteers have an enjoyable experience, they will keep coming back," says McGlade.

Volunteer students plant trees as part of the Anacostia Watershed Society's "Trees for Schools" program.

Members of the Washington [DC] Hebrew Congregation help clean up Watts Branch, a heavily polluted creek in the Anacostia River watershed.

According to Joan Sutton, volunteer for the Society, McGlade's prediction is true. "I really enjoy volunteering with the Society," says Sutton. "The staff makes us feel like we are needed, and every time I go out, I notice that the areas of the Anacostia River I work in keep getting better and better. I'm looking forward to the next cleanup."

For more information, please contact:

Anacostia Watershed Society
The George Washington House
4302 Baltimore Ave.
Baltimore, MD 20710

(301) 699-6204

All photos courtesy of Anacostia Watershed Society.
Submitted July 1999

(top) **RETURN**

BAY NET: Training Ambassadors to the Ocean

Although similar to National Parks, National Marine Sanctuaries do not have many paid personnel to interact with visitors and educate them about the protected area. Monterey Bay National Marine Sanctuary, however, is using trained BAY NET volunteer docents to answer questions about ecologically significant areas and share information about the pristine central California coast.

BAY NET is one of the few volunteer docent programs in the nation specifically designed to raise public awareness in the National Marine Sanctuary Program, a network of federally protected marine areas designated to secure the valuable resources within them. "The BAY NET program is unique because it teaches volunteers about the Monterey National Marine Sanctuary and trains them how to effectively convey what they learn to the public," says Milos Radakovich, BAY NET program director.

Click here to listen to Rachel Saunders, former director of BAY NET, tell how BAY NET helps protect the resources of the Monterey Bay National Marine Sanctuary.

BAY NET is sponsored by the Center for Marine Conservation, a nationwide, non-profit marine conservation organization. Radakovich is responsible for recruiting the volunteers, who come from diverse backgrounds, organizing their training, and scheduling their shifts within the sanctuary.

Volunteers complete a 40-hour training course before becoming a sanctuary docent. The training course combines classroom lectures by notable community leaders, scientists, and naturalists with instructional field trips within

the sanctuary.

Trained docents participate in frequent "enrichments," which keep the volunteers updated on recent events within the sanctuary and the community.

Visitors get too close to the elephant seals in the Monterey Bay National Marine Sanctuary. BAY NET docents educate visitors about the negative consequences of interacting with marine life.

"We teach the volunteers about habitat preservation issues, cultural history, local marine fauna, and what sort of things are regulated [by the sanctuary] and why," says Radakovich, noting that the BAY NET program tries to provide the volunteer docents with answers to the typical questions visitors ask.

In return for their extensive education, BAY NET volunteers are asked to commit to at least 100 hours of shoreline service in their first year as docents. According to Radakovich, this commitment has not posed a problem for most of the trainees. In fact, the outstanding participation by the present volunteers, and the overwhelming attendance at recent training sessions indicate that the BAY NET program will be able to place docents at even more sites throughout the sanctuary in the near future.

Rachel Saunders, former Director of BAY NET, looks out at Pacific Grove, California from a BAY NET docent station in the Monterey Bay National Marine Sanctuary.

Radakovich says along with the increased volunteer participation, the program also has received strong community backing. As a result, he hopes to share the BAY NET program with other national marine sanctuaries.

Kip Evans, Education Program Specialist at the Monterey Bay Sanctuary, says "BAY NET is an excellent volunteer organization. It is the only program around here that extensively trains volunteers and puts them out on the coast as 'Ambassadors to the Ocean.' "

For more information, please contact:

BAY NET

P.O. Box 51595
Pacific Grove, California, 93950

(831) 643-2638

All photos and audio courtesy of BAY NET.
Audio excerpted from "Ambassadors for the Ocean" video.
Submitted July 1999

(top) **RETURN**

Center for Marine Conservation: The International Coastal Cleanup is One Step Ahead

The Center for Marine Conservation has been in the trash collecting business for a while now. Through the International Coastal Cleanup, part of their Marine Debris Prevention Program, they have learned the importance of visioning and not letting their program become the "same old, same old." Instead, the Center has taken an initiative in one state, expanded it internationally, and is now moving forward in addressing the sources of coastal pollution.

Click here to listen to Dave Duenas, Guam's Coastal Cleanup Coordinator, explain the history of the program and Guam's involvement in it.

"The cleanup is a feel-good activity that you can't argue with," says Seba Sheavly, Atlantic regional director with the Center for Marine Conservation. "It is a unique environmental event that has expanded on its own. Now we are focusing our efforts on the information gained from the cleanup to address solutions at the community level."

The annual one-day cleanup, which started in 1986 with 2,800 volunteers cleaning up the coast of Texas, has expanded to include over 500,000 volunteers in 55 U.S. states and territories and more than 90 countries.

Each area has a volunteer coordinator, the "lifeblood of the project" according to Sheavly, who is responsible for organizing the local event. The Center provides educational materials and cleanup supplies along with assistance on

public relations, maintaining a detailed Web site, and supplying data cards where volunteers can record the results of their cleanup efforts. Following the cleanup, these data cards are sent back to the Center, where results are tabulated and analyzed, and summary reports are generated to provide feedback to the local coordinators.

Many children, like the ones shown here picking up trash, participated in the 1998 Guam International Coastal Cleanup.

To continue to expand their cleanup campaign, the Center has established the Model Community Program, which looks at the causes of pollution and how it can be prevented. One of the program's pilot projects is in Ocean City, New Jersey, where trash along the boardwalk was studied.

Coastal cleanups all over the world attract families, like this father and daughter team from Guam, who want to help improve the beaches near where they live.

The assumption was that thoughtless tourists or other visitors were responsible for the debris. Through intense daily surveys by volunteers, it was discovered that seagulls picked through the trash cans at night, scattering debris over the boardwalk. A simple solution, which included modifying the trash can lids and working with local vendors along the boardwalk, was used to address the problem.

The hope is that this New Jersey pilot study, as well as studies in Hawaii, California, Texas, Florida, Louisiana, and Puerto Rico, will serve as solution templates for other communities. "Coastal debris is the most solvable pollution issue facing us today. Behind every piece of trash is a person's face. People are the problem, but they are also the solution," states Sheavly.

For more information, please contact:

Center for Marine Conservation-Atlantic Regional Office
1432 N. Great Neck Road, Suite 103
Virginia Beach, VA 23454

(757) 496-0920 (phone)
(757) 496-3207 (fax)

All photos and audio courtesy of Center for Marine Conservation.
Audio excerpted from "Man, Land, and Sea: Coastal Clean-up" video.
Submitted July 1999

(top) **RETURN**

Elizabeth River Project: Volunteer Diversity is the Key

The Elizabeth River Project started as a discussion among four citizens around a kitchen table and grew into a non-profit organization with hundreds of volunteers, including politicians, educators, shipyard workers, and environmentalists. This unique group is able to overcome their various economic, social, and political backgrounds to work together towards one goal -- to cleanup and restore the Elizabeth River.

Click here to listen to Susan Cofer, volunteer for the Elizabeth River Project, describe why the program is successful.

"Through their broad connections in the community and their strong desire to see something happen, the four started bringing people to the group," says Laura Dukat, volunteer and public outreach coordinator for the Elizabeth River Project. Because a broad range of support is essential, volunteers include business owners, government workers, laborers, scientists, educators, and stay-at-home parents.

Before restoring the river, a tributary to the Chesapeake Bay that winds through four large cities in southeastern Virginia, a plan had to be developed. By seeking out people with varied strengths and expertise, the group of four eventually grew into 120 volunteers forming the Watershed Action Team. This team worked cooperatively for over a year to reach consensus on 18 specific action items for restoration of the river, which is designated as one of three toxic "Regions of Concern" on the Bay.

According to Susan Cofer, a long-time volunteer, because members of the Watershed Action Team came from such diverse backgrounds, they were

required to "leave their hats at the door" and come to discussions with open minds and a willingness to listen and learn. What made this work, says Cofer, was that "everyone was there to solve the problem, not point fingers. The key to success of this plan was the diversity of people involved, and the organization and focus provided by Executive Director, Marjorie Mayfield."

The Elizabeth River Project works to restore the river and create a healthier environment for the Great Egret, a native species.

A volunteer plants marsh grass at the bank of the Elizabeth River. Wetland restoration is a major component of the Elizabeth River Project's action plan.

As the Elizabeth River Project moves into the implementation phase, volunteers are still an integral component, according to Dukat. For example, landscape designers and biologists work with facilities along the river to restore and enhance habitats. Volunteers from all backgrounds and experiences are needed to make the list of actions from the Watershed Team a reality.

"Capitalizing on the diversity of the volunteers and making them part of the solution are what makes the Elizabeth Project work," says Cofer. "If everyone, from business, government, and citizen groups, is an equal partner, then they have ownership and it becomes their restoration plan."

Read a Virginia-Pilot newspaper article about the Elizabeth River Project.

For more information, please contact:

Elizabeth River Project
801 Boush Street
Norfolk, Virginia, 23510

(757) 625-3648

All photos and audio courtesy of Elizabeth River Project.
Audio excerpted from "What is it About a River" video.
Submitted July 1999

(top) **RETURN**

Businesses star in nature's upkeep.

Originally appearing in The Virginian-Pilot, 10/19/98.

By Scott Harper, Staff Writer

CHESAPEAKE - Amid soot-stained railroad tracks, security gates and looming oil tanks is a little green oasis here on the grounds of Cargill Inc. – a garden, really, where butterflies dance and birds nervously stop and stare.

It seems out of place. A stark contrast to the desolate industrial landscape on the grubby shores of the Southern Branch of the Elizabeth River, a waterway considered one of the most polluted on the East Coast.

Planted this month by Cargill employees and other volunteers, this small grouping of 300 native plants, shrubs and wildflowers is but one sunny example of a feel-good environmental program gaining momentum and membership across South Hampton Roads.

Launched in May 1997, the River Star program now boasts 48 participants in four cities and includes such diverse "stars" as Ford Motor Co., the Christian Broadcasting Network, People for the Ethical Treatment of Animals, the Navy, the Coast Guard, even the Hampton Roads Regional Jail.

"It's something that's taken on a life of its own here," said John Mullholland, superintendent of Cargill's oilseed processing plant in the industrial corridor of Chesapeake. "It's been great for morale. People here can see we're trying to do the right thing, and they feel good about that."

The program is quite simple, say organizers at the Elizabeth River project, a grass-roots environmental group based in Norfolk: Get businesses and industries in the watershed to do something, *anything*, positive for the natural world around them. Plant trees, clean up property, hang some bird houses.

Then, the plan goes, gently nudge participants to keep doing more, while publicly applauding each progressive step they take, however large or small.

This way, organizers say, a new conservation ethic might take hold where neglect and carelessness have reigned for decades. For only when a nurturing, community-based mindset is adopted voluntarily, argues the Elizabeth River Project, can a watershed so tied to industry, manufacturing and shipping ever hope to be restored.

"Just because they're industrial doesn't mean they don't care about the environment," said Cathy Spangler, a former NASA employee who now helps run the River Star program.

"They're people, too," she added. "They've got kids. They don't want to pollute. And we're finding that once they start with us, they want to do more."

It's a subtle, conciliatory approach that departs from the traditional activist strategy of government regulation and corporate punishment. And while some environmental groups question whether volunteerism is enough, only time will tell if the experiment is enough, only time will tell if the experiment will lead to meaningful change.

Businesses certainly are impressed. Some say that being a River Star is a savvy public-relations tool that helps prove their political correctness and increase employee morale. Others say it's just plain good for business.

Consider Hardy Building Corp. of Virginia Beach.

As part of its River Star agenda, this small supply company recently held a Family Habitat Day. Employees and their families planted trees, installed bird houses and cleaned up trash near Thalia Creek. A small story ran in The Virginian-Pilot the next day that caught the attention of supermarket giant Food Lion.

"They called us out of the blue and said they were impressed with a company like ours," said Janice Gates, Hardy's director of business development. "And they invited us to bid on one of their contracts. That's a big opportunity for us."

Huntsman Chemical Corp. shows another strength of the program – recognizing environmental performance and encouraging its continuance.

A manufacturer of polystyrene packages and materials, Huntsman has spent $5 million in recent years to reduce its air-pollution emissions, said Van White, the company's manager of environmental affairs. Hardly anyone noticed, though.

While the improvements didn't result from River Stars, the Elizabeth River Project nonetheless thought Huntsman should get some credit for significantly reducing pollutants that damage the river.

So it celebrated the improvements by declaring Huntsman an Achievement River Star, a status held by just eight other participants in the program.

Now, Huntsman wants to do more. White said employees soon will be restoring 9 acres along the Southern Branch of the Elizabeth River in Chesapeake by planting native shrubs and trees that require no chemicals for upkeep.

A butterfly garden, complete with bluebird, Purple Martin and wood duck boxes, also is in the works. And Huntsman now regularly talks to a consulting biologist and the U.S. Fish and Wildlife Service about how best to landscape its grounds. That was unheard of a couple years ago, White said.

"Huntsman is one of the big industries on the river, and we think we can help improve it," White said. "We encourage others to join, too."

Peter Schmidt is another big fan. The president of Agglite of Virginia, Inc., a concrete company in Chesapeake, Schmidt was former Gov. George F. Allen's appointed director of the state Department of Environmental Quality in the mid-1990s.

DEQ regulates what business and industry discharge into air, water, and soil, so Schmidt knows firsthand how government rules work – and don't work – with the private sector.

"I think you need some degree of regulation and some broad mandates," Schmidt said recently . "But you've also got to encourage businesses – reward them, motivate them – to do some voluntary things that help the environment.

"Without that component, I don't think you'll ever be that successful in really protecting the environment."

Agglite also is a River Star, and plans to convert weed-filled property along the Southern Branch to wildlife habitat. Schmidt, too, sits on a River Star committee of the Elizabeth River Project, which certifies environmental plans, and he urges other businesses to step up to the plate.

The program is not just for businesses. Schools and government agencies – even the Elizabeth River Project itself – also are members.

Nor do participants have to do anything right away. They only must sign a contract promising to take action, or at least adopt a plan, within a year.

Only one company – Spangler would not say which one; the Elizabeth River Project, she said, is not about pointing fingers – has been dropped from the program for failing this one requirement.

Several members talked about the importance of being "a good neighbor," but had trouble citing specific projects they've done or plan to do.

There are three levels within the program: "entry," for participants in the planning stages; "achievement," for those that have completed a project; and "model," for members that have finished a load of environmental work.

As of last week, there were 38 entry members, nine achievement stars, and one model star: the Norfolk Naval Base.

Outlined by Dianne Bailey, pollution-prevention program manager at the naval base, those myriad improvements include: reducing the amount of paint thrown away; creating recycling programs; restoring native marshes; building an osprey-nesting platform (this

spring brought the first mating pair of sea hawks to the platform, Bailey said; it produced three youngsters); even filtering mercury from the base's dental clinic.

"We take up a large part of the Elizabeth River waterfront, so it makes sense for us to be involved," said Paula Keicer, an environmental spokeswoman at the base. "It's our home, too."

Great American Fish Count: Promoting Volunteer Collection of Data

Coastal resource managers challenged to promote public education and research marine habitats may find a common solution in the Great American Fish Count. This nationwide program provides a fun, educational activity for the public and research data for managers.

"This is not the same old, same old. It provides the public with an educational awareness of the environment, and hands-on involvement in resource management by providing baseline data," said Jennifer Dianto, fisheries outreach coordinator for the American Oceans Campaign, one of three partnering organizations involved in the program.

Volunteers divers take notes during a fish count. Volunteer data on the abundance of different fish species is used by scientists and resource managers.

Ed Cassano, manager of the Channel Islands National Marine Sanctuary off the coast of Santa Barbara, California, described the program as "very powerful. We're engaging a volunteer force in the collection of data that serves resource managers. This is providing long-term monitoring in an area of the marine environment that is hard to access with traditional monitoring methods."

The program involves training volunteer scuba divers and snorklers to conduct a standardized visual census during the month of July. It began in 1992 when a small group of recreational divers and marine biologists from the Channel Islands National Park conducted a visual fish census modeled after the Audubon Christmas Bird Count. In 1994, the Channel Islands Marine Sanctuary joined the program and helped develop training materials and coordinate the event. Today the Great American Fish Count is a partnership between the American Oceans Campaign, Reef

Environmental Education Foundation (REEF), and NOAA's National Marine Sanctuary Program. Six sanctuaries served as dive sites in 1998.

"This is a great tool for educational and public awareness," she said. "We have the same target audience and the same educational goals as many of the coastal programs. The Great American Fish Count is really a great way to enhance coastal management programs."

Dianto said coastal managers who participate in the Fish Count can choose their level of involvement. "The only thing we require of managers is to assist in local outreach and publicity of the event; however, involvement can range from passing out flyers and hosting training seminars to actually conducting seminars and fish count dives."

A volunteer diver determines the species name of a fish using an identification book. Volunteers are encouraged to learn fish identification skills before participating in the fish count.

She said the Great American Fish Count partners are planning a nationwide media campaign to help increase pubic awareness of the program, the coastal management organizations, and fish habitat conservation.

"This gives coastal management programs that have an educational component the opportunity to actually involve the general public in collecting data and rallying support for their efforts. It's a wonderful opportunity to increase awareness," Dianto said.

For more information, contact:

Great American Fish Count
Brian Huff at:
(800) 8 OCEAN-0

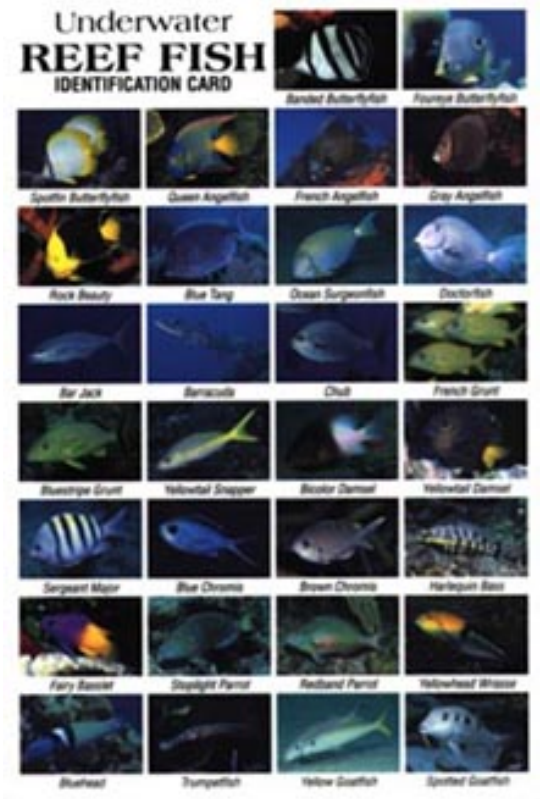
GAFC@yahoo.com

All photos courtesy of Great American Fish Count.
Submitted July 1999

(top) **RETURN**

Reef Environmental Education Foundation: Diving into Volunteerism

Members of the Reef Environmental Education Foundation (REEF) are passionate about their underwater volunteer work. For them, volunteering is not just a chance to make a difference, but a good excuse to enjoy their favorite pastime.



Waterproof fish keys help REEF divers identify species.

"We take the enthusiasm of our divers, and direct it towards collecting valuable information for resource managers," says Laddie Akins, executive director. Founded in 1990, REEF enlists divers and snorkelers to become active stewards in the conservation of coral reefs and other marine habitats.

The 15,000 members of REEF include both new and experienced recreational divers who conduct surveys of fish during their dives. Volunteers take a waterproof slate and marker with them underwater, and record the names and numbers of the various fish species they can identify. After the dive, results are transferred to a form that is scanned into a computer at the University of Miami. Scientists use the divers' data to produce reports tracking species distribution and population trends for a specific site, or larger geographic areas.

The volunteer program not only provides valuable scientific data for marine resource managers but it also attracts newcomers to the sport through annual events such as the Great American Fish Count, which is designed to raise awareness and encourage participation in REEF's year-round volunteer program.

In addition, resort and dive operators have teamed with REEF to offer its members week-long field surveys in exotic locations like the island Bonaire in

the Netherland Antilles. As part of the trip, REEF staff present fish identification and behavior tips to make the experience more fun for new divers. "The whole idea is to make the task enjoyable," says Akins, "as well as gather data that show Marine Protected Areas really work."

For more information, contact:

Reef Environmental Education Foundation
P.O. Box 246,
Key Largo, Florida, 33037

(305) 451-0312

All photos courtesy of Reef Environmental Education Foundation.
Submitted July 1999

(top) **RETURN**

REEF divers record names and numbers of fish species during a survey. (Photo courtesy of Brad Doane)

Home
Index

Coastal Volunteer Network

Success Stories

Resources

Contributors
About this Site

Tampa BayWatch: Students Nursing Wetlands

T • A • M • P • A
BAYWATCH

A Stewardship Program for Tampa Bay

Community service, when combined with hands-on learning, creates an opportunity for students to build new skills, develop citizenship, and in the case of a growing number of Tampa Bay area high schools, restore hundreds of acres of wetlands. In the past five years, almost 3,000 students have experienced these benefits firsthand through the High School Wetlands Nursery Program.

The award-winning nursery program provides a source of native wetland plants for use in habitat restoration projects in the Tampa Bay Estuary, while teaching students the value of a healthy environment. "Once students are involved in the nursery, they can never view their Tampa Bay home the same way," comments Lakewood High School Science Teacher Lita Weingart. "While they may not all go on to conservation careers, students can no longer look at a wetland and think it's just a bunch of grass."

Student volunteers in Tampa Bay help restore local wetlands which provide food and protection for egrets and other wading birds.

Peter Clark, executive director of the non-profit Tampa BayWatch, says he borrowed the idea from a program in the Puget Sound, where students raised and released salmon for a river restoration project. Clark and Weingart developed the pilot after receiving a grant from the Tampa Bay National Estuary Program in 1994. Since then, 10 other high schools have established nursery programs, which altogether grow enough plants to restore up to 20 acres of salt marsh habitat annually.

Clark explains that students are involved in the entire process, from constructing the nursery to participating in wetland restoration events coordinated by Tampa BayWatch. Spartina alterniflora, a common plant of the saltmarsh, is collected in small clumps, or plugs, from sites approved by the Florida Department of Environmental

Protection. These plants, known as the donor stock, are separated and planted in trays in the nursery, where they grow for six to eight months.

Students then pull about half of the plants for restoration projects, and recycle the other half by separating and replanting them in the nursery for another six to eight months. Experienced students serve as mentors to new volunteers, training them in all phases of production.

Student volunteers transplant spartina from the high school nurseries.

"For many students, it's experience that they usually don't get until college, and it gives them wonderful exposure to the scientists who visit the nurseries," says Weingart, who uses the nursery as an integral part of her science curriculum. Students outside Weingart's classes can volunteer on their own, or through the school's ecology club. School administrators also accept volunteer hours as credit toward several scholarship programs that require community service.

"It's said that you only protect what you love," says Weingart. "When these students tell me they've visited **their** marsh, I know it's a lesson that will last a lifetime."

For more information on the High School Wetlands Nursery program, please contact:

Sari Schlossberg
Tampa BayWatch
8401 9th St. North, Suite 230 B
St. Petersburg, FL 33702

(727) 896-5320
TPBAYWATCH@aol.com

All photos courtesy of Tampa BayWatch.
Submitted July 1999

(top) **RETURN**